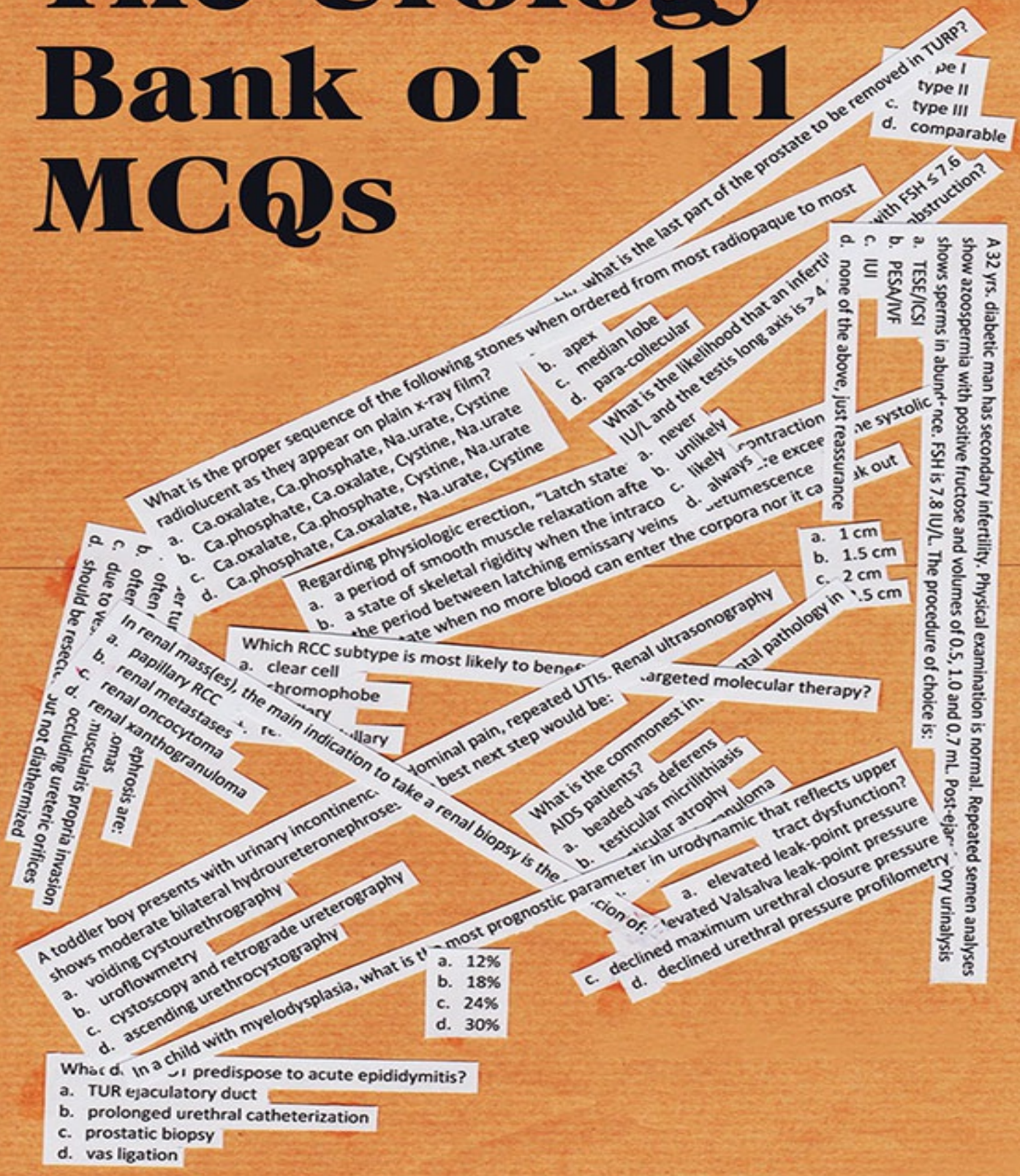
The Urology Bank of 1111 MCQs


What is the proper sequence of the following stones when ordered from most radiopaque to most radiolucent as they appear on plain x-ray film?
a. Ca.oxalate, Ca.phosphate, Na.urate, Cystine
b. Ca.phosphate, Ca.oxalate, Cystine, Na.urate
c. Ca.oxalate, Ca.phosphate, Cystine, Na.urate
d. Ca.phosphate, Ca.oxalate, Na.urate, Cystine
what is the last part of the prostate to be removed in TURP?
b. apex
c. median lobe
d. para-collecular
type I
type II
type III
d. comparable
with FSH ≤ 7.6
obstruction?
What is the likelihood that an infertil
IU/L and the testis long axis is > 4
a. never
b. unlikely
c. likely
d. always
d. none of the above, just reassurance
A 32 yrs. diabetic man has secondary infertility. Physical examination is normal. Repeated semen analyses show azoospermia with positive fructose and volumes of 0.5, 1.0 and 0.7 mL. Post-ejac shows sperms in abund nce. FSH is 7.8 IU/L. The procedure of choice is:
a. TESE/ICSI
b. PESA/IVF
c. IUI
d. none of the above, just reassurance
Regarding physiologic erection, "Latch state
a. a period of smooth muscle relaxation afte
b. a state of skeletal rigidity when the intraco
c. the period between latching emissary veins
d. the state when no more blood can enter the corpora nor it ca
a. 1 cm
b. 1.5 cm
c. 2 cm
Which RCC subtype is most likely to bene
a. clear cell
In renal mass(es), the main indication to take a renal biopsy is the
a. papillary RCC
renal metastases
renal oncocytoma
renal xanthogranuloma
Which d predispose to acute epididymitis?
a. TUR ejaculatory duct
b. prolonged urethral catheterization
c. prostatic biopsy
d. vas ligation
A toddler boy presents with urinary incontinenc
shows moderate bilateral hydroureteronephrose
a. voiding cystourethrography
b. uroflowmetry
c. cystoscopy and retrograde ureterography
d. ascending urethrocystography
a. 12%
b. 18%
c. 24%
d. 30%
What is the commonest in
AIDS patients?
a. beaded vas deferens
b. testicular micrilithiasis
testicular atrophy
a. elevated leak-point pressure
b. elevated Valsalva leak-point pressure
c. declined maximum urethral closure pressure
d. declined urethral pressure profilometry

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PREFACE

The first edition of ***The Urology Bank of 1111 MCQs*** *is the first ebook of the prime author. He is a fellow of the royal college of surgeons in Ireland, Saudi board of Urology, Radboud University in the Netherlands, and a clinical research associate from McMaster University, Canada. The book at hand is the outcome of the international blend. The prime author is the editor-in- chief of the international journal of clinical updates.*

The Urology Bank of 1111 MCQs *has been built up to be one of the richest banks in different specialties of Urology that provides the you-must-know information in the form of multiple- choice questions. In addition, the book aims at constructing a common platform of Urology science which staff, fellows, board residents, and interns could refer to on daily communication. It is a self-assessment tool that is easy to browse in the clinic, on rounds, and at the bedside. The bank derives its wealth from major Urology references and from the European Association of Urology (EAU) guidelines. It is made in an attractive look and a familiar language with broad margins at either side of the questions for writing down notes.*

We aim at testing knowledge acquisition and application, albeit data analysis is tested in fewer instances. The questions are presented in Calibri (body) theme font to provide the best readability. The questions` stems are short, bold, and typed in size 14 font. Each question has four options. It is hard for a test taker who doesn't know the answer to guesstimate. We have used plausible distractors and avoided double negatives. Furthermore, we have used the finished and unfinished statement styles and avoided complex structures of questions. We have implemented the (how common is ...) and (what is the likelihood that ...) styles of questions as we believe that the reader`s intuition and clinical sense last longer, in mind, than figures do.

I would like to acknowledge the contributors who shared their efforts, time, and knowledge to produce this book. I would also like to express my gratitude to my co-workers who provided me the logistic support to present this book in its best shape.

Atif A. Katib, M.D.

Mar, 2018

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BASIC SCIENCE

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **The mature genitourinary system develops from all of the following embryonic sources, EXCEPT:**
   a. intermediate mesoderm
   b. mesothelium of celomic cavity
   c. endoderm of the urogenital sinus
   d. somatic ectoderm

2) **Which zone of the prostate originates from the Wolffian duct tissue:**
   a. central zone
   b. peripheral zone
   c. transitional zone
   d. periurethral glands

3) **Which part of the prostate is traversed by the ejaculatory duct:**
   a. central zone
   b. peripheral zone
   c. transitional zone
   d. fibromuscular stroma

4) **At which week of gestation do the primordial germ cells migrate to form the genital ridges?**
   a. third
   b. fourth
   c. fifth
   d. seventh

5) **All of the following develop from the mesonephric ducts, EXCEPT:**
   a. vas deferens
   b. seminal vesicles
   c. appendix epididymis
   d. appendix testis

6) **Which period of intrauterine life does the process of organ formation (organogenesis) take place?**
   a. 9 – 12 weeks
   b. 12 – 15 weeks
   c. 15 – 18 weeks
   d. 18 – 21 weeks

7) **At what month of intra-uterine life do testes descend into the scrotum with the aid of the intra-abdominal pressure and the gubernacula?**
   a. sixth
   b. seventh
   c. eighth

d. ninth

8) By which of the following structures, do the fused lower poles of hoarseshoe kidneys get trapped during embryologic ascent?

a. inferior mesenteric artery
b. superior mesenteric artery
c. celiac artery
d. common iliac artery

9) Regarding renal ectopia, usually, the adrenals:

a. are cross ectopic
b. are at their normal position
c. travel with the kidneys
d. undergo ischemic atrophy

10) Which of the following hormones, primarily, controls spermatogenesis?

a. GnRH
b. testosterone
c. LH
d. FSH

11) How many days does spermatogenesis take in the man?

a. 16
b. 32
c. 64
d. 90

12) To which group of lymph nodes do tumors at the anterior superior area of the bladder, first, drain?

a. hypogastric
b. internal iliac
c. external iliac
d. lateral sacral

13) Which of the following mediates calcium reabsorption in the distal renal tubules?

a. aldosterone
b. hypocalcemia
c. parathyroid hormone
d. vitamin D

14) Where do Cowper`s gland ducts drain into?

a. ejaculatory ducts
b. prostatic urethra
c. membranous urethra
d. bulbous urethra

15) How many renal papillae are there in a typical kidney?

a. 4 to 6

b. 7 to 9
c. 10 to 12
d. 13 to 14

16) In which organelle in Leydig cell does testosterone synthesis take place?

a. ribosome
b. mitochondria
c. Golgi apparatus
d. endoplasmic reticulum

17) What is the most significant innervation of the vas deferens?

a. sympathetic nervous system
b. parasympathetic nervous system
c. somatic nervous system
d. none of the above

18) Which part of the prostate prevents the seminal fluid from entering the bladder during ejaculation?

a. central zone
b. peripheral zone
c. preprostatic tissue
d. anterior fibromuscular stroma

19) What is the nerve supply of the adrenal gland?

a. sympathetic to the medulla
b. parasympathetic to the medulla
c. sympathetic to the cortex
d. parasympathetic to the cortex

20) Which lab results indicate poor prognosis of male infertility?

a. azoospermia; normal FSH; increase LH
b. azoospermia; decrease FSH; normal LH
c. oligospermia; increase FSH; normal LH
d. oligospermia; normal FSH; decrease LH

21) Which statement explains the first event in the micturition reflex?

a. opening of internal bladder sphincter
b. fall in urethral pressure
c. rise in intravesical pressure
d. cessation of sphincter EMG activity

22) At which type of renal tubular acidosis (RTA), typically, potassium levels increase?

a. type 1
b. type 2
c. type 3
d. type 4

23) Which type of renal tubular acidosis (RTA) is more likely to form renal stones?

a. type 1
b. type 2
c. type 3
d. type 4

24) Beside renal excretion of sodium, what does atrial natriuretic hormone cause?

a. constriction of renal afferent arterioles
b. renin inhibition
c. aldosterone stimulation
d. rise in systemic blood pressure

25) Which of the following explains infertility in liver cirrhosis male patients?

a. decrease plasma estradiol levels
b. increase plasma testosterone-estradiol-binding globulin levels
c. suppression of suprarenal androgens
d. exaggerated pituitary response to feedback hormones

26) The commonest neoplasms that metastasize to kidneys come from:

a. breasts
b. thyroids
c. lungs
d. liver

27) Which of the following diabetes mellitus treatments causes erectile dysfunction?

a. long-acting insulin
b. metformin
c. sulfonylurea
d. none of the above

28) Which class of the following diuretics could cause erectile dysfunction?

a. loop diuretics
b. thiazide diuretics
c. potassium sparing diuretics
d. osmotic diuretics

29) What is the most likely cause of large scrotal hematoma in neonates?

a. clotting factor VIII deficiency
b. clotting factor IX deficiency
c. breech delivery
d. scrotal cavernous haemangioma

30) Which disease is described best by the following manifestations: grand mal epilepsy, mental retardation, hypertension, angiomyolipoma, adenoma sebaceum, bilateral enlarged kidneys, and normal renal function?

a. autosomal dominant polycystic kidney disease
b. von Hippel-Lindau disease
c. tuberous sclerosis

d. Sturge-Webber syndrome

31) Which of the following is NOT related to von Hippel-Lindau disease?

a. retinal hemangioblastoma
b. ureteral atresia
c. pheochromocytomas
d. multiple cysts in the pancreas and kidneys

32) What does make UTI more common in mid-aged females than in males?

a. short female urethra
b. pregnancy
c. vaginal colonization with enterobacteria
d. all the above

33) What is the most likely diagnosis of an erectile dysfunction patient with low plasma testosterone and high prolactin levels?

a. pituitary adenoma
b. adrenal adenoma
c. Kallmann syndrome
d. Klinefelter syndrome

34) What are the first and second most common zones from where prostate cancers arise?

a. central then transitional
b. peripheral then transitional
c. peripheral then central
d. transitional then central

35) Which agent should be avoided during living-related donor nephrectomy?

a. ice slush
b. heparin
c. norepinephrine
d. methylene blue

36) Adult size of bladder capacity is achieved at what age?

a. 5 – 6 yrs.
b. 7 – 8 yrs.
c. 9 – 10 yrs.
d. 11 – 12 yrs.

37) At which condition is alpha-fetoprotein most frequently elevated?

a. infiltrating ductal carcinoma of the breast
b. seminoma
c. hepatocellular carcinoma
d. malignant melanoma

38) What is the half-life of β-HCG?

a. 5 – 7 days
b. 24 – 36 hours

c. 2 – 3 days
d. 12 – 24 hours

39) Which of the following is NOT a cause of hypocitraturia?

a. high protein diet
b. hypokalaemia
c. proximal renal tubular acidosis
d. idiopathic

40) What is the prime effect of antidiuretic hormone on kidneys?

a. increase collecting duct permeability
b. increase medullary blood flow
c. decrease cortical blood flow
d. decrease potassium secretion

41) What is the best initial therapy for hyponatremic dehydration?

a. administration of hypertonic saline
b. administration of crystalloid
c. administration of normal saline
d. administration of ringer lactate

42) What is the most frequent anomaly associated with multicystic renal dysplasia?

a. ureteral atresia
b. vesicoureteral reflux
c. ureteropelvic junction obstruction
d. ureteral duplication

43) What do the specialized cells, at the juxtaglomerular apparatus, produce?

a. erythropoietin
b. renin
c. angiotensin I
d. angiotensinogen

44) Which innervations mediate detumescence?

a. cavernous nerves
b. dorsal nerves of the penis
c. sympathetic nervous system
d. parasympathetic nervous system

45) What causes ureteral dilation during pregnancy is:

a. mechanical compression by the gravid uterus
b. physiological increase urine flow during pregnancy
c. elevated levels of progesterone
d. reflex inhibition of ureteral contractions

46) Which statement regarding post-obstructive diuresis (POD) is false?

a. urine production exceeding 200 ml/hr for 2 consecutive hours or producing greater than 3 L of urine in 24 hours is diagnostic of POD

b. pathologic POD can be exacerbated by excessive fluid replacement
c. the replacement fluid choice is ringer lactate
d. fluid resuscitation depends on the degree of dehydration

47) Renal blood flow is autoregulated by:

a. sympathetic nervous system
b. parasympathetic nervous system
c. urinary output
d. afferent arteriolar resistance

48) Which of the following conditions could result in white urine?

a. chyluria
b. bacteriuria
c. phosphaturia
d. all of the above

49) Which statement is false concerning capacitation of spermatozoa?

a. occurs after acrosome reaction
b. entails removal of a glycoprotein layer
c. it is a biochemical event of sperm maturation
d. changes occur in the female genital tract

50) All of the following conditions are related to obesity syndrome, EXCEPT:

a. super fertility
b. increase aromatization reaction
c. increase resistance to circulating insulin
d. sleep apnea

51) Which part of the male urethra is the narrowest?

a. the membranous
b. the bladder neck
c. the bulbous
d. the external urethral meatus

52) To which region does pain, from the left mid ureter, refer to?

a. the loin region
b. the inguinal region
c. the umbilical region
d. the penis or clitoris

53) Which statement is true about the female urethra?

a. harder to catheterize when compared to the male urethra
b. 4 inch long
c. opens into the vestibule below the clitoris
d. gets wider at the post-menopausal age

54) Which structure is a part of the renal hilum?

a. renal pelvis

b. branches of the renal artery
c. tributaries of renal vein
d. all of the above

55) Which artery is NOT a branch of the anterior division of internal iliac artery?
a. superior vesical artery
b. inferior vesical artery
c. superior gluteal artery
d. inferior gluteal artery

56) Which statement is false concerning the epididymis?
a. each epididymis can be palpable at the postero-lateral surface of the testis
b. has 3 parts; head, body, and tail
c. new batches of sperms stay in the epididymis around 2 days for maturation
d. shares the same blood supply of the testis

57) In males, which of the following structure(s) can NOT be palpated during digital rectal examination?
a. pelvic floor muscles
b. seminal vesicles
c. anterior surface of the sacrum
d. median lobe of the prostate

58) Which group(s) of lymph nodes drain(s) the glans penis?
a. internal and external iliac
b. superficial inguinal
c. deep inguinal
d. superficial and deep inguinal

59) Which of the following is NOT a part of the urogenital diaphragm structures?
a. perineal membrane
b. deep transverse perineal muscle
c. urethral sphincter
d. Camper`s fascia

60) Which statement is false concerning smegma?
a. it is the white secretion produced under the foreskin in males
b. it has a crucial role in penile cancer development
c. it contains lysozymes, chymotrypsin, neutrophil elastase and cytokines
d. female smegma can be found between the labia

61) Which statement is false concerning the gubernaculua?
a. degenerate after birth
b. called the caudal genital ligaments
c. help guide the testes down through the inguinal canals
d. represent undifferentiated mesenchyme

62) Which type of renal stone crystals is known as “coffin lid”?

a. oxalate
b. struvite
c. urate
d. cystine

63) How can hyperuricosuria cause calcium oxalate calculi?

a. by increasing oxalate absorption
b. by heterogeneous nucleation
c. by inducing hyperoxaluria
d. by reducing urate crystals saturation

64) Regarding multicystic kidneys, at what age does the compensatory renal growth end?

a. at birth
b. 2 years
c. at puberty
d. none of the above

65) What are the posterior relations of the kidneys?

a. quadratus lumborum and diaphragm
b. psoas and diaphragm
c. psoas and latissimus dorsi
d. transversus abdominus and paraspinous

66) What are the abnormalities that might accompany complete ureteral duplications?

a. reflux to the upper pole ureter, obstruction to the lower pole ureter
b. reflux to the lower pole ureter, obstruction to the upper pole ureter
c. left ureteropelvic junction obstruction, right ureterocele
d. right ureteropelvic junction obstruction, left ureterocele

67) Which of the renal artery occlusive conditions, commonly, do NOT affect renal function?

a. intimal fibroplasia
b. medial fibroplasia
c. medial hyperplasia
d. serosal hyperplasia

68) Which of the following is false regarding zona glomeruloza?

a. the most superficial layer of the adrenal cortex
b. responses to increased potassium levels, renin or decreased renal blood flow
c. it causes pheochromocytoma
d. secretes aldosterone

69) Which organism is capable of proliferation in the urine and causing urethritis?

a. Ureaplasma urealyticum
b. Chlamydia trachomatis
c. E. coli
d. Neisseria gonorrhea

70) Which of the following is (are) direct branch(es) of the abdominal aorta?

a. median sacral artery
b. inferior phrenic arteries
c. gonadal arteries
d. all of the above

71) Which anomaly might accompany horseshoe kidneys?

a. ureteropelvic junction obstruction
b. ureterocele
c. ureteral reflux
d. ureteral atresia

72) Which action of thigh muscles could be impaired if the obturator nerve was injured during endoscopic resection of bladder tumors?

a. adduction
b. abduction
c. flexion
d. extension

73) Which organ contributes most to the seminal fluid volume?

a. testes
b. prostate
c. seminal vesicles
d. bulbourethral glands

74) Which layer lies between the superficial and deep inguinal lymph nodes?

a. Scarpa`s fascia
b. fascia lata
c. Dartos fascia
d. Camper`s fascia

75) What causes Cushing`s disease is:

a. bilateral adrenal hyperplasia
b. pituitary over secretion of ACTH
c. exogenous administration of glucocorticoids
d. immune-mediated disease

76) What is the narrowest part of the ureter?

a. uretero-pelvic junction
b. uretero-vesical junction
c. where ureters cross the pelvic brim
d. where ureters cross the common iliac bifurcation

77) Which of the following is NOT a component of the normal semen?

a. zinc
b. fructose
c. prostate-specific antigen
d. alkaline phosphatase

78) Which of the following is false regarding Addison`s disease?

a. autoimmune disease in 70% of the cases
b. diagnosed by the rapid ACTH stimulation test
c. characterized by low serum sodium and high potassium
d. may coexist with hyperthyroidism and diabetes mellitus

79) Which statement is NOT related to Klinefelter syndrome?

a. sterility is the rule
b. has a considerable short life span
c. treatment requires testicular microdissection and sperm extraction
d. 47 XXY karyotype

80) What is the creatinine clearance in ml/min for a 70 kg man aging 50 yrs. with 1.1 mg/dL serum creatinine?

a. 79.54
b. 44.19
c. 84.15
d. 94.25

81) Where is Santorini plexus located?

a. at either side of the prostate
b. in the pubo-prostatic space
c. anterior to the seminal vesicles
d. posterior to the vaso-epididymal junction

82) How does estrogen prevent lower UTI in postmenopausal women?

a. increasing vaginal secretions
b. decreasing vaginal pH
c. increasing normal vaginal flora
d. decreasing bacterial adherence

83) What helps in treating Candida albicans cystitis is:

a. sodium bicarbonate
b. phyto soya
c. ascorbic acid
d. sol palmetto

84) Where is the centre of "reflex erection" located at?

a. the brain cortex
b. the sacral cord
c. the lumbar cord
d. the hypothalamus

85) In which body tissue(s) are creatine and phosphocreatine converted to creatinine?

a. bone marrow
b. skeletal muscles
c. brown fat

d. liver

86) Which of the following lab results indicates prerenal failure?

a. serum BUN : creatinine > 20
b. urine [Na] < 30 mEq/L
c. Na excretion fraction < 1
d. all of the above

87) Where is the gene "sex-determining region" (SRY) located at?

a. long arm of X chromosome
b. long arm of Y chromosome
c. short arm of Y chromosome
d. short arm of X chromosome

88) Which nephron segment contains the most diluted urine in central diabetes insipidus patient?

a. proximal convoluted tubules
b. distal convoluted tubules
c. collecting duct
d. loop of Henle

89) Which hormone measures testicular germ cell function best?

a. LH
b. FSH
c. HCG
d. none of the above

90) Which agent is safe to kidneys?

a. amoxicillin
b. gentamycin
c. diclofenac
d. herb extract

91) Which of the following is NOT a side effect of hydrochlorothiazide?

a. hypercholesterolemia
b. hyperuricemia
c. hypoglycemia
d. hypercalcemia

92) Which of the following conditions could happen in chronic pancreatitis and malabsorption syndrome with steatorrhea?

a. hyperoxaluria
b. hypercalciuria
c. hyperuricosuria
d. hyperphosphateuria

93) Which of the following does NOT affect serum creatinine?

a. gender

b. age
c. obstructing stone at left lower ureter
d. rhabdomyolysis

94) What is the nature of the prostate-specific antigen?

a. protease
b. lyase
c. carboxylase
d. hydrolase

95) Which of the following does NOT increase PSA value?

a. trauma to the prostate
b. digital rectal examination
c. urinary retention
d. prostatitis

96) What is the function of PSA in semen?

a. increases semen volume
b. has antimicrobial activity
c. liquefies the seminal coagulum
d. decreases semen pH

97) Which of the prostate medications could result in retrograde ejaculation?

a. tamsulosin
b. doxazosin
c. dutasteride
d. alfuzosin

98) Which of the prostate medications could result in significant hypotension?

a. finasteride
b. prazosin
c. silodosin
d. vardenafil

99) What is the most significant complication of cyclosporine?

a. hepatic toxicity
b. renal toxicity
c. neural toxicity
d. cardiac toxicity

100) Which of the following carries the greatest risk of HIV transmission to health care workers?

a. splash of patient`s blood to the eyes
b. splash of patient`s blood to the mouth
c. surgical suture needle stick
d. hollow bore needle stick

101) Which antibiotic is the best to treat soft tissue infection with methicillin-resistant

Staphylococcus aureus (MRSA) in hospitalized patients?

a. vancomycin
b. cefotaxime
c. penicillin G
d. tobramycin

102) Which artery(ies) supply(ies) the prostate?

a. middle rectal
b. inferior vesical
c. a & b
d. none of the above

103) The manifestations of autonomic dysreflexia include:

a. hypotension and tachycardia
b. hypotension and bradycardia
c. hypertension and tachycardia
d. hypertension and bradycardia

104) What could cause autonomic dysreflexia?

a. full bladder or rectum
b. tooth extraction
c. hypertension medications
d. uncontrolled diabetes mellitus

105) During fluoroscopy, what is the main source of radiation hazards that urologists could be exposed to?

a. scattered radiation from the unleaded wall
b. scattered radiation from the patient
c. scattered radiation from the floor and ceiling
d. radiation from the primary beam

106) What is the earliest clinical sign of puberty in boys?

a. hoarseness of voice
b. enlargement of testes
c. appearance of axillary hair
d. change in body odor

107) What is the appropriate intravenous maintenance fluid for a 16 kg girl?

a. 43 ml/hr of normal saline
b. 78 ml/hr of ¼ normal saline
c. 69 ml/hr of ½ normal saline
d. 54 ml/hr of ¼ normal saline

108) Which medicine(s) might enhance hypoprothrombinemic effect on oral anticoagulants?

a. allopurinol
b. aminoglycosides
c. cimetidine

d. all of the above

109) What causes pure testicular feminization is:

a. over estrogen synthesis
b. defective end-organ androgen response
c. extra X chromosome (XXY)
d. failure of genital ridge regression

110) What increases blood volume and pressure in corpora cavernosa during erection is:

a. increase in sympathetic discharge
b. contraction of ischiocavernosa and bulbocavernosa muscles
c. increase arterial flow and closure of emissary veins
d. shunting of blood from the dorsal to the central cavernosal artery

111) In which condition creatinine levels can NOT be 1200 mg/dL?

a. an aspirate of pelvic urinoma
b. in untreated end-stage renal failure disease
c. a sample from a wound drain after pyeloplasty
d. a sample from suprapubic catheter

112) What does apoptosis mean?

a. programmed cell death
b. new vascular formation
c. uninhibited neural stimulation
d. premature muscular contraction

113) Which agent is most likely to cause hemorrhagic cystitis?

a. cisplatin
b. ifosfamide
c. phosphomycin
d. amphotericin B

114) Which of the following does asymptomatic hematuria workup include?

a. cystoscopy
b. CT urography
c. urine cytology
d. all of the above

115) What could render "red urine" workup, false positive for hematuria?

a. dehydration
b. myoglobinuria
c. high doses of vitamin C
d. all of the above

116) What do urine tests examine to detect hematuria?

a. catalase activity of erythrocytes
b. peroxidase activity of erythrocytes
c. lyase activity of erythrocytes

d. none of the above

117) Hematuria of glomerular origin is associated with:

a. significant proteinuria, dysmorphic RBCs, RBC casts
b. glycosuria, eumorphic RBCs, WBC casts
c. hypercalciuria, eumorphic RBCs, granular casts
d. proteinuria, dysmorphic RBCs, hyaline casts

118) Which type of urinary casts are solidified Tamm–Horsfall mucoproteins secreted from the tubular epithelial cells of individual nephrons?

a. granular
b. hyaline
c. waxy
d. pigment

119) Which statement is false concerning the dipstick method for detecting hematuria?

a. depends on the ability of hemoglobin to oxidize a chromogen indicator
b. negative results need to be confirmed by microscopic examination
c. has a sensitivity of 95% and a specificity of 75%
d. the presence of many epithelial cells suggests skin or vaginal contamination

120) Which statement is false concerning microhematuria?

a. malignancy is identified in patients presenting with microhematuria more than in patients presenting with gross hematuria
b. microscopic hematuria is defined as > 3 red blood cells per high powered field (RBC/hpf) on a single specimen
c. warrants full hematuria workup
d. history of cigarette smoking is of significance

121) Which class of the following agents does NOT impair spermatogenesis?

a. alkylating agents
b. phenothiazines
c. antiandrogens
d. prostaglandins

122) Which drug does NOT result in urinary retention?

a. terazosin, antihypertensive
b. benzodiazepines, psychotropic medicine
c. levodopa, anti-Parkinsonism medicine
d. brimonidine, glaucoma eye drops

123) What is the best method to evaluate calcium levels in the urine?

a. from early morning urine sample
b. comparing urine and serum calcium at a given time
c. performing 24 urine collection
d. from a mid-stream urine sample

124) Which statement concerning urine pH is false?

a. influenced by food and medications
b. renal stones form at the extremes of pH range
c. reliable only when measured by 24 hr. urine collection
d. ranges from 4 – 7

125) What is the number of bacteria per high-power field microscopy that matches colony counts of 100,000/mL?

a. 100
b. 50
c. 10
d. 5

126) Which area in the nervous system is tested by bulbocavernosus reflex?

a. brain stem
b. $C_2 – C_4$
c. $S_2 - S_4$
d. $L_2 - L_4$

127) What is true regarding hematospermia?

a. should be investigated thoroughly like hematuria
b. is rarely associated with significant urologic pathology
c. carries a risk of infertility
d. mandates testicular biopsy

128) Which of the following might cause sterile pyuria?

a. renal tuberculosis
b. urinary tract stones
c. interstitial cystitis
d. all of the above

129) Which microbe causes "red diaper syndrome"?

a. Serratia marcescens
b. Streptococcus pyogenes
c. Clostridium difficile
d. Staphylococcus saprophyticus

130) What causes "pink diaper syndrome" is (are):

a. Staphylococcus epidermidis in the urine
b. dried urate crystals on the diaper
c. Adenovirus 11 in the urine
d. Candidiasis in the urine

131) What is the most common cause of hematuria in men over 60 yrs.?

a. kidney stones
b. glomerulonephritis
c. BPH
d. bladder cancer

132) What is false about indinavir sulfate stones?

a. intratubular crystal formation might occur
b. CT cannot reliably confirm the presence of indinavir calculi
c. stone formation is demonstrated in 80% of patients taking the medication
d. is a protease inhibitor with poor solubility and significant urinary excretion

133) What is false about "purple urine bag syndrome"?

a. occurs due to the interaction between the chemical components of the urine and polyvinyl chloride material in the urine bag
b. it is commonly symptomless
c. more common in female nursing home residents
d. commonly implicated bacteria are K. pneumoniae, P. mirabilis, E. coli

134) What is false concerning renal vasculature?

a. there are 4 surgical segments of the kidney, based on the segmental artery distribution
b. along the kidney convexity, there is an avascular plane
c. there are no collaterals between segmental arteries
d. in < 10%, the posterior branch is the first to branch off the renal artery

135) What is false concerning the collecting system structures of a typical kidney?

a. the renal pelvis could be intra or extra renal
b. the renal pelvis divides into 2 or 3 major calyces
c. major calyces divide into 2 or 3 minor calyces
d. unlike lateral calyces, polar calyces are often paired

136) What is false concerning the urinary bladder anatomy?

a. as it distends, it peels off the peritoneum from the abdominal wall
b. the interureteric ridge is located between the 2 ureteric orifices and the uvula vesicae
c. Waldeyer`s sheath covers only the distal ureter and forms the deep trigone
d. in adults, it is percussible over the abdomen when contains at least 150 ml

137) What type of renal tubular acidosis (RTA) does demonstrate aldosterone resistance?

a. type 1
b. type 2
c. type 3
d. type 4

138) What is false concerning PSA molecule?

a. the free form of PSA exists in small proportions in the body, and found mainly in BPH and in the ejaculate
b. α1- anti chymotrypsin binds to 3 epitopes of the PSA molecule to form a complexed PSA
c. α2- macroglobulin binds to 5 epitopes of the PSA molecule to form a complexed PSA
d. the purified PSA molecule has a molecular weight of 90 kDa

139) When should a 70 yrs. man with 40 ml prostate volume, and total PSA of 2.0 ng/ml, go for a prostate biopsy?

a. if PSA reading had exceeded 2.7 ng/ml over 12 months

b. if free PSA reading was less than 0.4 ng/ml
c. if total PSA reading was greater than 8 ng/ml
d. any of the above

140) On tracing the IVU dye down, in a dilated ureter, the dilation stops at a level then continues as a normal calibre ureter. What could the pathology be?

a. lower ureteral stricture
b. ureteral valve
c. modified Lich-Gregoire ureteral reimplantation
d. residual dilation of hydroureter

141) What is false concerning coagulase splitting bacteria (Griess) test?

a. it is a reduction reaction that converts nitrate to nitrite
b. nitrazine reagent papers are used to elicit the reaction
c. it is false negative in diluted urine, on taking vitamin C, and in gram +ve bacteria
d. the reaction takes 4 minutes to complete

142) Bacterial resistance to antibiotics may occur because of:

a. inherited chromosomal-mediated resistance
b. acquired chromosomal-mediated resistance
c. extrachromosomal-mediated resistance
d. all of the above

143) What class of antibiotics might cause vestibular and/or auditory impairment?

a. aminoglycosides
b. αantipseudomonal penicillins
c. cephalosporins
d. fluoroquinolones

144) What antibiotic could result in "red man syndrome"?

a. vancomycin
b. clindamycin
c. streptomycin
d. tobramycin

145) What is false concerning fosfomycin antibiotic?

a. has a limited cross-resistance with most common antibacterial agents
b. causes injection site reactions
c. is active against most uropathogens
d. is effective as a single-dose agent

146) Which of the following is NOT a sex accessory tissue?

a. the prostate gland
b. seminal vesicles
c. epididymi
d. bulbourethral glands

147) In utero, which hormone stimulates the development of Wolffian ducts?

a. estradiol
b. DHT
c. FSH
d. testosterone

148) In utero, which hormone stimulates the development of the prostate gland?

a. estradiol
b. DHT
c. FSH
d. testosterone

149) Which α- adrenergic receptor subtype mediates smooth muscle contraction of the prostate?

a. α1-A
b. α2-A
c. α1-B
d. α2-B

150) The majority of circulating testosterone is:

a. bound to sex hormone-binding globulin
b. free
c. bound to α1-antichymotrypsin
d. bound to albumin

151) The epithelial component of the prostate consists of all of the following, EXCEPT:

a. basal cells
b. intermediate cells
c. tubulo-columnar cells
d. neuroendocrine cells

152) Serum testosterone should be measured:

a. at mid-day
b. at the hour of sleep
c. in the morning
d. late afternoon

153) How long post bilateral orchiectomy, will patients be functionally castrated?

a. immediately
b. after 2 hrs.
c. after 12 hrs.
d. after 24 hrs.

154) What degrades semenogelin and determines the consistency of the seminal coagulum is:

a. spermine
b. acid phosphatase
c. PSA
d. semenoglobulin

155) Which of the following process(es) is (are) reversible?

a. 5α-reductase enzyme reduces testosterone to DHT
b. aromatase enzyme reduces testosterone to estrogen
c. PSA molecule binds to α1-antichymotrypsin and α2-macroglobulin
d. none of the above

156) Which of the following contributes second to the seminal fluid by volume?

a. seminal vesicles
b. the prostate
c. testes
d. bulbourethral glands

157) Which of the following does NOT increase in prostate cancer?

a. human kallikrein 2
b. pro-PSA
c. free PSA
d. complexed PSA

158) What vessels are located in the prostate neurovascular bundle?

a. Watson plexus
b. capsular arteries and veins
c. inferior vesical and midrectal vessels
d. Santorini plexus

159) From where does the main parasympathetic efferent innervation to the pelvic plexus arise?

a. S_1
b. S_2-S_4
c. T_{11}-L_2
d. L_3-S_1

160) What nerve provides the major neural supply to the striated urinary sphincter and levator ani muscle?

a. somatic innervations
b. sympathetic fibers from T_{11} - L_2
c. the pudendal nerve
d. the obturator nerve

161) Branches of what artery travel under the endopelvic fascia form the prostate to the sidewall of the pelvis?

a. obturator artery
b. midrectal artery
c. inferior vesical artery
d. pudendal artery

162) What fascial layer(s) cover(s) the prostate?

a. Denonvilliers fascia
b. prostatic fascia
c. levator fascia
d. all of the above

163) Between which 2 fascial planes does the prostatic neurovascular bundle travel?

a. prostatic fascia and levator fascia
b. prostate capsule and prostatic fascia
c. Denonvilliers fascia and prostate capsule
d. Denonvilliers fascia and endopelvic fascia

164) What is the approximated bladder capacity of an 8 yrs. girl?

a. 150 ml
b. 200 ml
c. 250 ml
d. 300 ml

ANSWERS TO BASIC SCIENCE

1-d ectoderm layer forms the neural system and the skin. Gray's Anatomy of the Human Body (30th Edition).

2-a peripheral and transitional zones; along with the periurethral glands are derivatives of the urogenital sinus. Gray's Anatomy of the Human Body (30th Edition).

3-a the ejaculatory duct traverses the prostate gland through the central zone. Gray's Anatomy of the Human Body (30th Edition).

4-c during the fifth week, the genital ridges form at the posterior body wall after primordial germ cells migration from the yolk sac. Gray's Anatomy of the Human Body (30th Edition).

5-d appendix testis and prostate utricle develop from paramesonephric ducts. Gray's Anatomy of the Human Body (30th Edition).

6-a organogenesis occurs between 9 to 12 weeks of gestational age. Gray's Anatomy of the Human Body (30th Edition).

7-b the testes enter the scrotal cavity at the 7th month of gestation. Gray's Anatomy of the Human Body (30th Edition).

8-a self-explanatory. Gray's Anatomy of the Human Body (30th Edition).

9-b despite the adjacent locations, the adrenals are embryologically and functionally distinct from the kidneys. Gray's Anatomy of the Human Body (30th Edition).

10-b testosterone controls spermatogenesis probably through Sertloi`s cells. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

11-c the entire process of spermatogenesis takes 64 days made by several cycles, one of which requires 16 days. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

12-c developmentally, the anterior superior aspect of the bladder is supplied by branches of the umbilical artery that become obliterated to be the median umbilical ligament. The lymphatics remain to drain at the median chain of the external iliac group. Gray's Anatomy of the Human Body (30th Edition).

13-c self-explanatory. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

14-d Cowper`s glands drain 3 to 4 mm distal to the begging of the corpus spongiosum into the bulbourethral. Gray's Anatomy of the Human Body (30th Edition)

15-b the number of renal papillae in either kidney varies from 4 to 18, but a typical kidney has 7 to 9. Gray's Anatomy of the Human Body (30th Edition).

16-d synthesis of testosterone begins as cholesterol in the mitochondria, and then the final organelle that makes up the testosterone molecule is endoplasmic reticulum. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

17-a despite sympathetic and parasympathetic systems operate on the vas, only the sympathetic controls the emission phase of ejaculation. Guyton and Hall Textbook of Medical Physiology, 12th Edition

18-c the preprostatic tissue is located proximal to the verumontanum and composed of sphincter-like cylindrical smooth muscles that prevent retrograde ejaculation. Guyton and Hall Textbook of Medical Physiology, 12th Edition

19-a the only demonstrated innervation of the adrenal gland is sympathetic branches from $T_{10} - L_1$ to the medulla. Gray's Anatomy of the Human Body (30th Edition)

20-c increase FSH indicates that the pituitary gland is stimulating the testis maximally, while no enough feedback from the testes. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

21-d the first stage of micturition reflex is shown as changes in the pelvic floor muscle activity, in the form of suppression of EMG sphincter activity. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

22-d type 4 is characterized by a deficiency of or inability to respond to aldosterone, resulting in high potassium level. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

23-a type 1 is characterized by calcium deposition due to Inability to excrete acid into the urine. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

24-b ANH causes natriuresis, inhibition of renin-angiotensin-aldosterone system, and blood pressure reduction. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

25-b liver cirrhosis results in increase plasma levels of testosterone binding proteins and increase in peripheral conversion of testosterone to estrogens. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

26-c lung neoplasms are the commonest solid tumors associated with kidney metastases. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

27-d self-explanatory. Desk Reference of Clinical Pharmacology, Second Edition, by Manuchair Ebadi.

28-b thiazide diuretics might cause dizziness, lightheadedness, blurred vision, loss of appetite, impotence, and others. Desk Reference of Clinical Pharmacology, Second Edition, by Manuchair Ebadi.

29-c retreated scrotal trauma at breach delivery is the commonest among all indicated reasons. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

30-c self-explanatory. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

31-b ureteral atresia is not related to von Hippel-Lindau disease. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

32-d self-explanatory. Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

33-a hyperprolactinemia characterizes pituitary adenoma of the choice list. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

34-b the commonest zone is the peripheral followed by the transitional. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

35-c norepinephrine could result in intrarenal vascular constriction which impairs allograft function. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

36-c the Koff formula ((bladder capacity (in ounces) = age (in years) + 2)). Gray's Anatomy of the Human Body (30th Edition).

37-c AFT is produced by the liver, gastro-intestinal tract, yolk sac, and non-seminomatous germ cell tumors of the testes. By definition, seminoma and choriocarcinoma do not produce AFP. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

38-b beta-HCG half-life is 24 – 36 hrs. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

39-c distal RTA along with all listed causes can lead to hypocitraturia. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

40-a the primary effect is to increase water retention through the collecting ducts. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

41-c the best of the listed choices that provides sodium and fluids is NS. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

42-a self-explanatory. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

43-b self-explanatory. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

44-c detumescence happens because of sympathetic discharge to the cavernous smooth muscles.

Guyton and Hall Textbook of Medical Physiology, 12th Edition.

45-a the most significant cause of ureteral dilation among the listed ones is mechanical compression of the ureter by the gravid uterus against the pelvic brim. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

46-c the replacement fluid of choice is normal saline. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

47-d primarily, auto regulation of renal blood flow occurs through variations in afferent arteriolar resistance. Guyton and Hall Textbook of Medical Physiology, 12th Edition

48-d self-explanatory. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

49-a capacitation occurs before acrosome reaction. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

50-a obesity syndrome is a recognized cause of infertility. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

51-d self-explanatory. Gray's Anatomy of the Human Body (30th Edition).

52-b pain from the upper ureter refers to the loin. The mid ureter refers to the inguinal region. The lower ureter refers to the genitalia. Gray's Anatomy of the Human Body (30th Edition).

53-c the female urethra is 4 cm long, easier to catheterize, and gets narrow atrophic post menopausally due to estrogen deprivation. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

54-d self-explanatory. Gray's Anatomy of the Human Body (30th Edition).

55-c superior gluteal artery is a branch of the posterior division of the internal iliac artery. Gray's Anatomy of the Human Body (30th Edition).

56-c new batches of sperms stay around 2 weeks for maturation. Gray's Anatomy of the Human Body (30th Edition).

57-d the median lobe, in particular, is engulfed by the lateral lobes and is not accessible for examination per rectum. Gray's Anatomy of the Human Body (30th Edition).

58-a the glans penis drains into the internal and external iliac lymph nodes. Gray's Anatomy of the Human Body (30th Edition).

59-d Camper`s fascia is a subcutaneous layer of abdominal fat. Gray's Anatomy of the Human Body (30th Edition).

60-b smegma is benign. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

61-a gubernaculua remain the whole life. Gray's Anatomy of the Human Body (30th Edition).

62-b struvite or triple phosphate or MAP crystals are known as coffin lid crystals. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

63-b in heterogeneous nucleation, the core structure of the stone is uric acid while the additional buildup is calcium oxalate. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

64-b the compensatory process begins after birth and completes by the age of 2. Gray's Anatomy of the Human Body (30th Edition).

65-a self-explanatory. Gray's Anatomy of the Human Body (30th Edition).

66-b the anomalies are described in Weigert-Meyer law. Gray's Anatomy of the Human Body (30th Edition).

67-b in medial fibroplasia, renal function and kidneys sizes typically remain unchanged. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

68-c zona glomeruloza secrets aldosterone, fasciculate secretes cortisol, reticularis secretes androgens and estrogen. Pheochromocytoma is a tumor of the renal medulla. Guyton and Hall Textbook of

Medical Physiology, 12th Edition.

69-a ureaplasma urealyticum fulfills the 2 conditions. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

70-d self-explanatory. Gray's Anatomy of the Human Body (30th Edition).

71-a the commonest of the listed anomalies is UPJ obstruction due to crossing aberrant blood vessel. Gray's Anatomy of the Human Body (30th Edition).

72-a obturator nerve injury leads to weakness at the adductor and the internal rotator muscles of the thigh. Gray's Anatomy of the Human Body (30th Edition).

73-c seminal vesicles form about ⅔ of the semen volume. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

74-b fascia lata separates the 2 groups of lymph nodes. Gray's Anatomy of the Human Body (30th Edition).

75-b Cushing syndrome is a complex entity mostly occurs due to exogenous administration of steroids, while Cushing`s disease is typically due to pituitary over secretion of ACTH. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

76-b uretero-vesical junction is 1 – 5 mm wide. Gray's Anatomy of the Human Body (30th Edition).

77-d acid phosphatase is a normal component human semen. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

78-d may coexist with hypothyroidism. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

79-b has a nearly normal life expectancy. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

80-a Cockroft-Gault formula is (140-age)X weight /(72 X serum creatinine). Guyton and Hall Textbook of Medical Physiology, 12th Edition.

81-b it is retropubic venous plexus located in the pubo-prostatic space. Gray's Anatomy of the Human Body (30th Edition).

82-b vaginal acidity helps in fighting UTIs. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

83-a urinary alkalinization is an important adjunct treatment in fighting candida albicans cystitis. Desk Reference of Clinical Pharmacology, Second Edition, by Manuchair Ebadi

84-b afferent pudendal inputs to the sacral segment of the spinal cord stimulate the nervi erigentes to produce erection. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

85-b in skeletal muscles, through a non-enzymatic conversion, creatine and phosphocreatine are converted to creatinine. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

86-d self-explanatory. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

87-c short arm of Y chromosome. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

88-c ADH works at the collecting ducts. Deficiency of the ADH as in diabetes insipidus results in diluted urine in collecting ducts. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

89-b FSH levels are inversely proportional to testicular germ cell function. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

90-a amoxicillin is the safest. It is safer to avoid herb extracts. Desk Reference of Clinical Pharmacology, Second Edition, by Manuchair Ebadi

91-c hyperglycemia and glycosuria might occur. Clinical Pharmacology, Second Edition, by Manuchair Ebadi.

92-a hyperoxaluria with a passage of calcium oxalate stones is documented in inflammatory bowel diseases. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

93-c a single patent urinary system is enough to maintain renal function. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

94-a PSA is a serine protease. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

95-b DRE but not prostate massage doesn't increase PSA. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

96-c PSA prolongs the liquefaction time of the ejaculate. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

97-a tamsulosin is reported to cause retrograde ejaculation. Desk Reference of Clinical Pharmacology, Second Edition, by Manuchair Ebadi.

98-b prazosin is an old generation alpha adrenergic blocker that is currently used to treat hypertension. Desk Reference of Clinical Pharmacology, Second Edition, by Manuchair Ebadi.

99-b nephrotoxicity has been reported in 50% of cases. Desk Reference of Clinical Pharmacology, Second Edition, by Manuchair Ebadi.

100-d the inoculum contained in the hollow needle is the biggest. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

101-a self-explanatory. Desk Reference of Clinical Pharmacology, Second Edition, by Manuchair Ebadi.

102-c self-explanatory. Gray's Anatomy of the Human Body (30th Edition)

103-d autonomic dysreflexia is a sympathetic over discharge due to noxious stimuli in a spinal cord injury above the T_6 level. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

104-a full bladder or rectum are the common reasons of autonomic dysreflexia. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

105-b self-explanatory. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

106-b it varies considerably, but usually, testicular enlargement is the first. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

107-d maintenance fluid is ¼ NS computed as follows; 100 ml for every kg for the first 10 kg of the child weight, then 50 ml for every kg for the second 10 kg of the child weight, and then 20 ml for every kg for the third 10 kg of the child weight. For this girl the sum up for 24 hr is 1300 ml which equals to 54 ml/hr. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

108-d self-explanatory. Desk Reference of Clinical Pharmacology, Second Edition, by Manuchair Ebadi.

109-b testicular feminization (XY) is an extreme form of pseudohermaphroditism due to a defect in end-organ androgen synthesis as an androgen insensitivity syndrome. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

110-c penile erection occurs due to parasympathetic outflow that leads to dilation of cavernosal smooth muscles and trapping of blood in the corpora as a result of the closure of emissary veins. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

111-b serum creatinine under no circumstances could be as high as 1200 mg/dL. In all other choices, creatinine levels represent urine values. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

112-a apoptosis is a process of programmed cell death that plays a crucial role in developing and maintaining the health of the body by eliminating old, and unnecessary cells. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross

113-b among chemotherapeutic agents, ifosfamide is the most common to cause hemorrhagic cystitis. Desk Reference of Clinical Pharmacology, Second Edition, by Manuchair Ebadi.

114-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A.

Peters.

115-d all the listed causes and others could result in false positive hematuria. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

116-b chemical tests for hematuria detect the peroxidase activity of erythrocytes by using benzidine. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

117-a proteinuria, dysmorphic RBCs, RBC casts, HTN, renal insufficiency are characteristics of nephrogenic hematuria. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

118-b the most common type of cast is hyaline cast that is solidified Tamm–Horsfall mucoproteins secreted from the tubular epithelial cells of individual nephrons. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

119-b only positive results need to be confirmed by microscopic examination. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

120-a the incidence of malignancy is related to the degree of hematuria. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

121-b chemotherapeutics such as alkylating agents impair spermatogenesis, as do so drugs affecting endocrine functions e.g. prostaglandins, and antiandrogens. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

122-a terazosin is an alpha adrenergic blocker that doesn't cause retention. On the other hand, anti-Parkinsonism, psychotropic medications, and alpha adrenergic agonists like brimonidine could lead to urinary retention in the susceptible patients. Desk Reference of Clinical Pharmacology, Second Edition, by Manuchair Ebadi.

123-c 24 hr. urine collection provides the basic investigation tool for urinary stones workup. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

124-c urine pH measurements are reliable when taken at random. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

125-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

126-c the anus and bulbocavernosa are innervated by S_2 - S_4. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

127-b hematospermia almost always resolves spontaneously and of little significance. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

128-d sterile pyuria might be caused by all of the listed causes in addition to renal papillary necrosis: diabetes, sickle cell disease, analgesic nephropathy, and other. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

129-a serratia marcescens in the urine are capable of producing a pigment called prodigiosin, which turns red in the soil or when mixed with the digestive tract products of various animals. This mixture could happen in a diaper of an infected baby with serratia marcescens and is easily mistaken for drops of blood. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

130-b dried urate crystals in the diaper might turn into pink powder. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

131-c BPH is commoner than the listed causes. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

132-c crystallization and stone formation are demonstrated in as many as 20% of patients taking the

medication. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

133-a it is caused by the indicated bacteria. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

134-d in over 50% of kidneys, the posterior branch of the main renal artery is the first to branch off. Gray's Anatomy of the Human Body (30th Edition).

135-d lateral calyces are typically paired, whereas polar calyces are often singles. Gray's Anatomy of the Human Body (30th Edition).

136-b the trigone is located between the 2 ureteric orifices and the uvula vesicae. Gray's Anatomy of the Human Body (30th Edition).

137-d type 4 RTA is common in diabetics with chronic renal disease who demonstrate aldosterone resistance. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

138-d the purified PSA molecule has a molecular weight of 30 kDa. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

139-d the listed scenarios discussed PSA velocity, ratio, and density respectively. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

140-b ureteral valve is a rare condition manifests as described above. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

141-d the reaction takes 4 hrs. to complete. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

142-d self-explanatory. Desk Reference of Clinical Pharmacology, Second Edition, by Manuchair Ebadi.

143-a aminoglycosides might cause ototoxicity to both vestibular and auditory components. Desk Reference of Clinical Pharmacology, Second Edition, by Manuchair Ebadi.

144-a vancomycin could result in "Red-man syndrome": flushing, fever, chills, rash, hypotension (histaminic effect). Desk Reference of Clinical Pharmacology, Second Edition, by Manuchair Ebadi.

145-b fosfomycin is an oral not injectable antimicrobial agent. Desk Reference of Clinical Pharmacology, Second Edition, by Manuchair Ebadi.

146-c sperms stay in the epididymi for 2 weeks and get mature during this period. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

147-d testosterone stimulates Wolffian ducts development into the seminal vesicles, epididymis, vas deferens, ampulla, and ejaculatory duct. Gray's Anatomy of the Human Body (30th Edition).

148-b DHT stimulates the prostate gland development. Gray's Anatomy of the Human Body (30th Edition).

149-a self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

150-a only 2% of the circulating testosterone is free, while the remaining is bound to different types of proteins most of which is sex hormone binding globulin. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

151-c the epithelial component of the prostate consists of basal cells, intermediate cells, and neuroendocrine cells. Gray's Anatomy of the Human Body (30th Edition).

152-c due to the diurnal variation of serum testosterone, it should be measured in the morning as it scores the peak. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

153-b because the plasma half-life of testosterone is 10 to 20 minutes, patients are functionally castrate within 1 to 2 hours after bilateral orchiectomy. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

154-c PSA degrades semenogelin in order to form the coagulum of the semen. Guyton and Hall Textbook of

Medical Physiology, 12th Edition.

155-d all of the indicated conversions are irreversible. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

156-b the prime contributors into the semen by volume are the seminal vesicles followed by the prostate gland. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

157-c free PSA doesn`t increase in prostate cancer. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

158-b self-explanatory. Gray's Anatomy of the Human Body (30th Edition).

159-b the autonomic innervation of the pelvic organs arises from the pelvic plexus of (S_2 to S_4). Gray's Anatomy of the Human Body (30th Edition).

160-c self-explanatory. Gray's Anatomy of the Human Body (30th Edition).

161-d self-explanatory. Gray's Anatomy of the Human Body (30th Edition).

162-d self-explanatory. Gray's Anatomy of the Human Body (30th Edition).

163-a prostatic fascia and levator fascia. Gray's Anatomy of the Human Body (30th Edition).

164-d (age + 2) X 30 = 300 ml. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

WOUND REPAIR AND CARE

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **Which of the following does NOT affect wound healing?**
   a. age
   b. gender
   c. medications
   d. anemia

2) **What does delay wound healing in diabetics?**
   a. diabetic neuropathy
   b. occurrence of infections
   c. chronicity of diabetes
   d. all of the above

3) **Which wound(s) heal(s) first?**
   a. 10 cm long clean surgical wound
   b. 22 cm long clean surgical wound
   c. 4 cm infected wound
   d. a & b

4) **What is the optimal time for delayed primary wound closure?**
   a. not before the second postoperative day
   b. not before the third postoperative day
   c. not before the fourth postoperative day
   d. not before the fifth postoperative day

5) **When the bottom of a pressure sore wound turns red, that is an indicative of:**
   a. granulation tissue formation
   b. necrotic tissue formation
   c. sloughed tissue accumulation
   d. presence of infection

6) **What kind of cells initiates granulation of a lacerated wound left to heal by secondary intention?**
   a. myofibroblasts
   b. macrophages
   c. neutrophils
   d. collagens

7) **What is the proper sequence of wound healing phases?**
   a. Inflammation, hemostasis, proliferative, maturation
   b. hemostasis, proliferative, Inflammation, maturation
   c. hemostasis, Inflammation, proliferative, maturation
   d. Inflammation, proliferative, hemostasis, maturation

8) **The movement of an organism in response to a chemical stimulus is called:**
   a. chemokinesis

b. haptotaxis
c. necrotaxis
d. chemotaxis

9) What happens within hours of repairing a full-thickness surgical incision is:

a. wound contracture
b. primary intention wound healing
c. delayed primary wound healing
d. secondary intention wound healing

10) Which statement is false concerning scar contracture?

a. It is the last phase of primary wound healing
b. composed of dense collagen, thin-wall blood vessels
c. seen commonly in 2nd or 3rd- degree burns
d. could lead to physical deformity and functional limitations

11) What is the best statement describing hair removal before surgery?

a. be 24 hrs. before surgery using electric hair clippers
b. be immediately before surgery using electric hair clippers
c. be 12 hrs. before surgery using a razor
d. be immediately before surgery using a sticky tape

12) Which wound closure device is preferred for mid-line laparotomy incision?

a. tissue adhesives (skin glue)
b. surgical tapes
c. sutures
d. staples

13) Which statement is false on comparing surgical sutures with staplers?

a. staplers carry the risk of foreign body ingestion in mentally impaired patients
b. sutures carry the risk of needle stick
c. staplers provide more meticulous skin approximation
d. suturing requires longer training

14) Which type(s) of collagen is (are) deposited during the proliferative phase of wound healing?

a. type I
b. type II
c. type III
d. type I & II

15) Which agent is proven to accelerate wound healing?

a. vitamin A
b. vitamin C
c. zinc
d. none of the above

16) Which statement is false regarding healing of clean wounds?

a. tensile strength is achieved in 3 weeks and increases up to 2 years
b. myofibroblasts promote wound contraction at the proliferative phase
c. type III collagen is gradually replaced by type I for remodeling
d. epithelialization is complete in 12 hrs. by bridge formation

17) Which statement is false concerning scars and scabs?

a. a scab is a temporary crust of dried blood clot that forms to protect a damaged area of the skin
b. some scabs are disfiguring and warrant cosmetic repair
c. a scar is a permanent deposition of fibrous tissue to replace damaged or lost skin
d. scabs will fall off on their own

18) Which statement is false concerning keloids and hypertrophic scars?

a. hypertrophic scars usually extend beyond the borders of the original wound
b. keloids are the result of an overgrowth of dense fibrous tissue that usually develops after healing of a skin injury
c. hypertrophic scars are characterized by erythematous, pruritic, raised fibrous lesions
d. treatment of either condition includes intralesional injections and/or excision

19) In which condition(s) does angiogenesis occur?

a. macular degeneration
b. tumor growth
c. healing of chronic ulcers
d. all of the above

20) The timing of stitches removal does NOT depend on:

a. stitches material
b. patient`s chronic illnesses
c. patient`s medications
d. wound location

ANSWERS TO WOUND REPAIR AND CARE

1-b gender has nothing to do with wound healing. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

2-d all the stated causes are mechanisms by which DM could impair wound healing. Schwartz's Principles of Surgery, 10th edition, by F. Charles Brunicardi MD, Dana K. Andersen MD, Timothy R. Billiar MD.

3-d clean wounds heal from side to side not from end to end. Rush University Medical centre Review of Surgery, 6th edition, by Jonathan Myers, Minh Luu, Keith Millikan.

4-c the optimal time of delayed primary wound closure is on or after 96 hrs. of wounding. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

5-a granulation tissue of healing is red in color. Schwartz's Principles of Surgery, 10th edition, by F. Charles Brunicardi MD, Dana K. Andersen MD, Timothy R. Billiar MD.

6-b macrophages remove cell debris and secrete growth factors that stimulate angiogenesis and granulation tissue formation. Rush University Medical centre Review of Surgery, 6th edition, by Jonathan Myers, Minh Luu, Keith Millikan.

7-c hemostasis, Inflammation, granulation, remodeling. Rush University Medical centre Review of Surgery, 6th edition, by Jonathan Myers, Minh Luu, Keith Millikan.

8-d the movement of an organism in response to a chemical stimulus is chemotaxis. Chemokinesis is scanning the environment. Haptotaxis is the generation of a chemoattractant gradient in the extracellular mallei employed in transendothelial migration and angiogenesis. Necrotaxis – negative or positive response to chemoattractants released from apoptotic or necrotic cells. Schwartz's Principles of Surgery, 10th edition, by F. Charles Brunicardi MD, Dana K. Andersen MD, Timothy R. Billiar MD.

9-b self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

10-a the last phase of primary wound healing is remodeling. Schwartz's Principles of Surgery, 10th edition, by F. Charles Brunicardi MD, Dana K. Andersen MD, Timothy R. Billiar MD.

11-b as per CDC guidelines, it should be immediately before surgery using electric hair clippers.

12-d staples provide the needed tensile strength in a shorter time when compared to sutures. Rush University Medical centre Review of Surgery, 6th edition, by Jonathan Myers, Minh Luu, Keith Millikan.

13-c sutures provide more meticulous skin approximation. Schwartz's Principles of Surgery, 10th edition, by F. Charles Brunicardi MD, Dana K. Andersen MD, Timothy R. Billiar MD.

14-c immature collagen type III is deposited at the proliferative phase. Rush University Medical centre Review of Surgery, 6th edition, by Jonathan Myers, Minh Luu, Keith Millikan.

15-d none have been proven to accelerate wound healing. Rush University Medical centre Review of Surgery, 6th edition, by Jonathan Myers, Minh Luu, Keith Millikan.

16-d epithelialization is complete in 48 hrs. by bridge formation made by inflammatory cells and exudates. Rush University Medical centre Review of Surgery, 6th edition, by Jonathan Myers, Minh Luu, Keith Millikan.

17-b some scars are disfiguring and warrant cosmetic repair. Schwartz's Principles of Surgery, 10th edition, by F. Charles Brunicardi MD, Dana K. Andersen MD, Timothy R. Billiar MD.

18-a keloids usually extend beyond the borders of the original wound. Schwartz's Principles of Surgery, 10th edition, by F. Charles Brunicardi MD, Dana K. Andersen MD, Timothy R. Billiar MD.

19-d self-explanatory. Rush University Medical centre Review of Surgery, 6th edition, by Jonathan Myers, Minh Luu, Keith Millikan.

20-a chronic diseases like DM, medications like steroids defer stitches removal. Wounds on the face should be removed earlier than leg wounds. Schwartz's Principles of Surgery, 10th edition, by F. Charles Brunicardi MD,

Dana K. Andersen MD, Timothy R. Billiar MD.

RADIOLOGIC EXAMINATIONS

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **What is the optimal time for viewing the renal parenchyma after injecting a contrast material during IVU study?**
   a. 0 minute
   b. 5 minutes
   c. 10 minutes
   d. renal parenchyma does not appear on IVU

2) **What is the emergency treatment of intravenous contrast allergy?**
   a. epinephrine
   b. atropine
   c. hydrocortisone
   d. antihistamine

3) **To which class of Bosniak system of renal cysts does an oval renal parenchymal cyst of uniform water density filling, with attenuation of ≤ 20 HU, thin, non-calcified wall, and no contrast enhancement; belong to?**
   a. class 1
   b. class 2
   c. class 3
   d. class 4

4) **Ultrasonic 3.5 MHz curved array probe is suitable to detect:**
   a. epididymal cysts
   b. testicular tumors
   c. renal stones
   d. penile vasculature

5) **Which condition does NOT show a false positive result for hydronephrosis on ultrasonic examination?**
   a. hydrocalicosis
   b. extrarenal pelvis
   c. parapelvic cyst
   d. class 2 Bosniak renal cyst

6) **Which condition does NOT show a false negative result for hydronephrosis on ultrasonic examination?**
   a. forniceal rupture
   b. drained renal pelvis
   c. high urine output
   d. acute obstruction

7) **Which statement is true concerning renal ultrasonography?**
   a. end-stage renal failure kidneys look small and hypoechoic
   b. is more accurate on diagnosing cystic lesions than solid masses

c. is able to detect tumors as small as 2 mm
d. cortical carbuncle might be mistaken for hydronephrosis

8) Which radiological modality carries the highest radiation hazard?

a. nuclear medicine
b. ultrasonography
c. X-ray fluoroscopy
d. intravenous urography

9) What is the improper usage of TRUS?

a. evaluate ejaculatory duct obstruction in infertility case
b. screen for prostate cancers
c. take prostate biopsies
d. place interstitial radiotherapy seeds

10) Which condition could present as a filling defect in the bladder on IVU study?

a. blood clot
b. fibro-epithelial polyp
c. sloughed renal papilla
d. all of the above

11) What should type II diabetic patients on metformin do when going for intravenous contrast urography to avoid biguanide lactic acidosis?

a. take urine acidifiers
b. withhold metformin the day before the study and restart 48 hrs. later
c. get premedicated by steroids and antihistamines
d. decrease metformin dose and turn to insulin

12) What is the minimum estimate of GFR to take gadolinium-based contrast agents?

a. more than 30 mL/min/1.73 m^2
b. more than 60 mL/min/1.73 m^2
c. more than 90 mL/min/1.73 m^2
d. none of the above

13) How does fluid appear on T_2-weighted MR images?

a. dark
b. intermediate
c. bright
d. none of the above

14) What matter does correspond to zero Hounsfield units?

a. air
b. water
c. fat
d. bone

15) What imaging modality is superior in detecting undescended testis in the abdomen?

a. MRI

b. CT
c. ultrasound
d. all are comparable

16) By ultrasonography, when kidneys appear darker than the liver, they are:
a. hypoechoic
b. hyperechoic
c. anechoic
d. isoechoic

17) What is correct concerning sound waves?
a. The higher the frequency, the deeper tissue penetration
b. The higher the frequency, the better the axial resolution
c. low-frequency transducers are of 6 to 10 MHz
d. the deeper tissue penetration, the better axial resolution

18) Which ultrasound mode is able to depict motion direction and flow velocity?
a. grey-scale
b. simultaneous bilateral views
c. color Doppler
d. power Doppler

19) How does a full bladder appear on ultrasonography?
a. hyperechoic
b. hypoechoic
c. isoechoic
d. anechoic

20) Which of the following is NOT an indication of retrograde pyelography?
a. evaluation of probable ureteral obstruction
b. conjunction with ureteroscopy
c. evaluation of hematuria
d. evaluation of probable ureterovesical reflux

21) Which of the following is false concerning retrograde urethrogram?
a. coning at the bulbar urethra is normal
b. segmental narrowing at bulbar urethra is normal
c. multiple round filling defects could be air bubbles
d. indicated in urethral trauma cases

22) Which of the following is NOT an indication of static cystography?
a. evaluating a probable bladder rupture
b. evaluating a probable colovesical or vesicovaginal fistulae
c. evaluating a probable intravesical pathology
d. evaluating a probable bladder diverticula

23) Which of the following is an indication of VCUG?
a. repeated febrile UTI in children

b. evaluating a probable posterior urethral valve
c. a & b
d. none of the above

24) Which statement is false concerning diuretic nuclear scintigraphy renogram?

a. elimination T½ < 10 minutes indicates obstructed system
b. the diuretic must be given at the maximum kidney activity
c. If ureteral stents are in place, the bladder catheter must be unclamped
d. ^{99}mTc-MAG_3 is the agent of choice to study differential renal function and obstruction

25) Which statement concerning phlebolith is false?

a. can be mistaken for a ureteral stone
b. a small single, usually spiky, calcification within a vein
c. the amount of phleboliths increases with age
d. appears more often on the left than on the right side of the pelvis

26) What is (are) the characteristic finding(s) of testicular torsion on color Doppler ultrasonography?

a. the classic blue dot sign
b. thick, short, edematous spermatic cord
c. absence of intratesticular blood flow
d. increased epididymal blood flow

27) What is the poorest method of measuring the amount of urine in the bladder of a 65 yrs. old man?

a. using bladder scanner
b. measuring the voided urine
c. using abdominal ultrasonography
d. performing urinary catheterization

28) On sagittal plane of midline TRUS, which structure might NOT be visible?

a. peripheral zone of the prostate
b. ejaculatory duct
c. tip of the right seminal vesicle
d. tip of the left lateral lobe of the prostate

29) Which structure can NOT be assessed by TRUS of the prostate?

a. ejaculatory duct
b. vas deferens
c. seminal vesicles
d. rectal wall

30) Ultrasonic waves, in nature, are:

a. mechanical waves
b. radar waves
c. microwaves
d. radio waves

31) What is false concerning "ureteric jets"?

a. obstruction of the upper urinary tract may increase renal pelvis pressure and delay or decrease pelvis peristaltic rates
b. measured by color Doppler flow mapping in transverse scans at the suprapubic region
c. patients with ureteral stents are the ideal
d. adequate hydration is necessary

32) What is the signal characteristic of renal stones on MRU?

a. high signal on T_1-weighted images
b. high signal on T_2-weighted images
c. low signal on T_1-weighted images
d. none of the above

33) Using ultrasonography, which testicular lesion is described as a solid, round, homogeneous, low-reflectivity tumor mass, with no calcification?

a. seminoma
b. embryonal cell tumor
c. mixed germ cell tumor
d. epidermoid cyst

34) Using ultrasonography, which testicular lesion is of low reflectivity with irregular borders, hypervascular rims but no internal vascularity to mention?

a. intratesticular hematoma
b. testicular abscess
c. orchitis
d. sex cord stromal tumors

35) Using ultrasonography, which testicular lesion is cystic with heterogeneous echoes representing a mixture of mucinous and/or sebaceous material with or without hair follicles, cartilages, and bones?

a. non-seminomatous germ cell tumors
b. acute bleed on top of old hematoma
c. mature teratoma
d. sex cord stromal tumors

36) Using CT scanning, which solid kidney mass is well-defined, heterogeneous tumor, located in the renal cortex and containing areas of fat density of -20 HU or less. No calcifications, but some areas of enhancement?

a. RCC
b. metastases
c. angiomyolipoma
d. oncocytoma

37) Using CT scanning, which solid kidney mass is sharply demarcated with uniform enhancement and often has a central scar?

a. RCC

b. metastases
c. angiomyolipoma
d. oncocytoma

38) Using CT, which solid kidney mass is like a bulge of the renal contour characterized by normal corticomedullary patterns?

a. prominent columns of Bertin
b. xanthogranulomatous pyelonephritis
c. lymphoma
d. renal infarction

39) On staging left kidney RCC using enhanced CT, the radiologist must look for:

a. extension of the tumor to the diaphragm
b. extension of the tumor to the right atrium
c. the density of calcifications
d. the amount and bilaterality of cysts formation

40) Which of the following is NOT an indication of renal arteriography?

a. preparation for donor nephrectomy
b. advanced RCC in the right kidney
c. renal artery stenosis
d. oncocytoma in the left kidney

41) What is (are) the indication(s) of renal artery embolization?

a. bleeding angiomyolipomas
b. alternative to nephrectomy in severe uncontrolled hypertension among patients with end-stage renal disease
c. renal artery aneurysms or symptomatic AV malformations
d. all of the above

42) Which statement is false concerning complications of left renal artery embolization?

a. embolizing the non-target artery might occur
b. severe pain at the renal area could occur
c. complications depend on the embolic agent
d. reactive left pulmonary edema

43) On clinical examination, what accidental finding has NO connection to renal cancer?

a. unilateral hydrocele
b. bilateral varicocele
c. calcifications at the renal area on plain KUB film
d. painless hematuria

44) Which statement is false regarding magnetic resonance urography (MRU)?

a. small non-obstructive calculi might be missed at MRU performed for the evaluation of hematuria
b. pediatrics, performing a dynamic contrast-enhanced imaging helps in evaluating crossing vessels in the setting of UPJ obstruction

c. the success of static-fluid MR urography depends on the presence of fluid within the urinary system regardless of renal function
d. MRU at 3T, carries the risk of nephrogenic systemic fibrosis

45) Which statement is false concerning plain KUB film?

a. reliable tool to exclude urinary calculi
b. calcifications at renal area might lead to the discovery of renal cancers
c. can detect soft tissues
d. fecoliths and phleboliths could be mistaken for calculi

46) What is false concerning Tc-99m DMSA?

a. diseases affecting the proximal convoluted tubules inhibit DMSA uptake
b. is ideal to assess UPJ obstruction in adults
c. gentamicin and cisplatin inhibit the DMSA uptake
d. allows better assessment of differential renal function

47) What is true concerning Tc-99m DTPA?

a. It`s uptake by glomerular filtration is almost 100%
b. It helps evaluate cortical structure and morphology
c. It provides a static picture of kidneys when compared to MAG_3
d. binds to the sulfhydryl groups in proximal tubules resulting in much higher resolution pinhole SPECT imaging

48) What is false on comparing Tc-99m DTPA to Tc-99m MAG_3?

a. DTPA provides better quality images with renal insufficiency
b. giving captopril, MAG_3 plasma clearance declines in hypertensive patients with renal artery stenosis but rises in those who do not have the disease
c. DTPA provides an excellent measurement of GFR
d. pediatrics, MAG_3 provides better quality images than DTPA

49) In routine practice, when do urologists request plain skull X-ray?

a. advanced prostatic cancer
b. central diabetes insipidus
c. pituitary adenoma
d. a & c

50) What is the hallmark finding on plain KUB of bladder exstrophy?

a. malunion of lumbar and/or sacral vertebral bodies
b. pelvic bone diastasis
c. sacral agenesis
d. fracture of anterior pubic rami

51) Which condition tops the differential diagnoses list of CT picture of Xanthogranulomatous pyelonephritis?

a. renal tuberculosis
b. renal abscess
c. renal cell carcinoma

d. angiomyolipoma

52) What nuclear medicine study can diagnose interstitial nephritis?

a. DTPA
b. DMSA
c. gallium-67
d. MAG-3

53) Regarding acute renal infections, what is the least diagnostic radionuclide study for detecting an inflammatory focus?

a. hippuran I-131
b. technetium-99m
c. gallium-67
d. indium-111–labelled WBC

ANSWERS TO RADIOLOGIC EXAMINATION

1-a nephrogram phase appears immediately after injection. Textbook of radiology and imaging, by David Sutton.

2-a intravenous 1 ml of epinephrine 1:10000 administered slowly. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

3-a the description meets class 1, with no surrounding masses and carries no risk of malignancy. Textbook of radiology and imaging, by David Sutton.

4-c the frequency of ultrasonic waves relates inversely to the depth of the structures under examination. Therefore, deep structures like kidneys require 3.5 MHz probe while superficial organs like epididymis, testis, and penis require 7.5 MHz probe. Textbook of radiology and imaging, by David Sutton.

5-d Bosniak cysts are cortical cysts and are usually not mistaken for hydronephrosis. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

6-c low urine output and dehydration result in false negative hydronephrosis. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

7-b solid masses are best diagnosed by CT, while renal cysts are adequately diagnosed by u/s. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

8-c fluoroscopy dose of radiation is 10 rad/min, while IVU is 3 rad. Nuclear medicine ranges from 0.2 to 4.2 rad. Textbook of radiology and imaging, by David Sutton.

9-b TRUS is not used for prostate cancer screening. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

10-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

11-b the proper action is to discontinue metformin the day before the study and restart 48 hours later. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

12-a greater than 30 mL/min/1.73 m^2. Textbook of radiology and imaging, by David Sutton.

13-c bright. fluid exhibits high signal on T_2-weighted images and a low signal on T_1-weighted images. Textbook of radiology and imaging, by David Sutton.

14-b water corresponds to zero Hounsfield units. Textbook of radiology and imaging, by David Sutton.

15-a MRI is superior in detecting soft tissue masses than others. Textbook of radiology and imaging, by David Sutton.

16-a by convention, the liver is used as a benchmark for echogenicity; darker structures are hypoechoic. Textbook of radiology and imaging, by David Sutton.

17-b the higher the frequency, the better the axial resolution, when the deeper structures are examined and vice versa. Textbook of radiology and imaging, by David Sutton.

18-c only color Doppler is able to evaluate flow velocity and motion direction. Textbook of radiology and imaging, by David Sutton.

19-d urine as well as clear fluids appear anechoic (black). Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

20-d ureterovesical reflux is better evaluated by voiding cystometrogram. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

21-b ring or segmental narrowing at bulbar urethra is a sign of urethral stricture. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

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31-c the presence of ureteral stents abolishes the study. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

32-d renal stones and calcifications have no signal characteristics. Therefore, they appear as a signal void. Textbook of radiology and imaging, by David Sutton.

33-a the description typically fits seminoma. Textbook of radiology and imaging, by David Sutton.

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38-a the description typically fits prominent columns of Bertin (Dromedary hump). Textbook of radiology and imaging, by David Sutton.

39-b RCC can invade the perinephric fat beyond the renal fascia and can extend into the renal vein, inferior vena cava and right atrium; and/or the adjacent adrenal gland. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

40-d diagnosis and treatment of oncocytoma don`t require renal arteriography. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

41-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

42-d reactive left pulmonary edema is not a recognized complication of RAE. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

43-a testicular hydroceles have nothing to do with renal cancers. Blocking the IVC by tumor thrombi could result in bilateral varicocele. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

44-d gadolinium administration has been linked to nephrogenic systemic fibrosis, but not MRU at 3T. Textbook of radiology and imaging, by David Sutton.

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46-b DMSA is an ideal agent for the assessment of renal cortex for scars and tumors. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

47-a apart from "a", all options describe DMSA. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

48-a MAG3 provides better quality images with renal insufficiency. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

49-d skull secondaries from metastatic prostate cancer; and widened sella turcica due to pituitary adenoma rationalize requesting plain skull x-ray by urologists. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

50-b pelvic bone diastasis. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

51-a the normal renal outline is lost. Typically, it is enlarged with a paradoxical contracted renal pelvis. The calyces, in contrast, are distorted with discrete hydrocalycosis. Textbook of radiology and imaging, by David Sutton.

52-c the infection seeking nuclear study is Gallium 67 scintigraphy. Textbook of radiology and imaging, by David Sutton.

53-d indium-111–labelled WBC studies have limited efficacy in establishing an inflammatory focus. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

URINARY CALCULUS DISEASE

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **What stone is inherited as an autosomal recessive trait?**
   a. xanthine
   b. ammonium urate
   c. cystine
   d. calcium oxalate dihydrate

2) **As per the "fixed particle theory" of stone formation:**
   a. the initial step is papillary plaque formation
   b. crystals formation occurs inside the nephron
   c. tubular precipitates form harmless crystalluria
   d. the attraction of organic compounds and activation crystallization is regulated by osteopontin

3) **What risk factor(s) promote(s) stone formation?**
   a. dehydration
   b. metabolic disorders
   c. congenital anomalies
   d. all of the above

4) **What are the expected findings on urinalysis in patients with acute renal colic?**
   a. blood cells more than pus cells
   b. pus cells if infection was superadded
   c. crystals might appear
   d. all of the above

5) **Worldwide, the commonest type of urinary stones is:**
   a. calcium monohydrate
   b. calcium oxalate
   c. ammonium urate
   d. none of the above

6) **What is false concerning primary bladder stones?**
   a. commoner in females than in males
   b. pediatrics, are of calcium oxalate and/or ammonium urate composition
   c. caused by bladder outlet obstruction
   d. might result in bladder cancer

7) **What is false concerning staghorn calculus?**
   a. commonly unilateral
   b. commonly due to repeated infections
   c. urate stones are the second most common cause of staghorn calculi
   d. ESWL monotherapy with ureteral stenting is the ideal treatment

8) **What is false concerning cystine stones?**
   a. result from an inherited defect of renal tubular reabsorption of cysteine

b. characteristically, urate and cysteine stone are radiolucent
c. cysteine is a dibasic amino acid
d. plain X-ray, cysteine stones exhibit "ground-glass" appearance

9) What is false concerning cystine stones?

a. have diagnostic hexagonal crystals
b. don't respond to ESWL therapy
c. are highly soluble in water
d. inherited in an autosomal recessive fashion

10) What is false concerning struvite stones?

a. the commonest to form staghorn giant calculi
b. formed by urease producing bacteria
c. antibiotics have a role in the treatment
d. form at the two extremes of urinary pH range

11) Which of the following bacteria split urea?

a. Klebsiella pneumonia
b. Morganella morganii
c. Proteus mirabilis
d. all of the above

12) Patients having what kind of stones should refrain from eating purines?

a. cysteine
b. urate
c. calcium
d. none of the above

13) What congenital anomaly is unlikely to result in stone formation?

a. left ureterocele
b. bifid right renal pelvis
c. neurogenic bladder
d. bilateral UPJ stenosis

14) In what kind of renal stones do antibiotics help most?

a. indinavir
b. magnesium ammonium phosphate
c. xanthine
d. matrix

15) What medications do NOT cause renal stones?

a. ciprofloxacin
b. indinavir
c. thiazides
d. triamterene

16) What stones are radiopaque on plain X-ray film?

a. 2,8 dihydroxyadenine stones

b. sulfa medications-induced stones
c. calcium oxalate stones
d. matrix stones

17) What is the proper sequence of the following stones when ordered from most radiopaque to most radiolucent as they appear on plain X-ray film?

a. Ca.oxalate, Ca.phosphate, Na.urate, cystine
b. Ca.phosphate, Ca.oxalate, cystine, Na.urate
c. Ca.oxalate, Ca.phosphate, cystine, Na.urate
d. Ca.phosphate, Ca.oxalate, Na.urate, cystine

18) What does NOT appear as a filling defect in the renal pelvis on IVU?

a. fungal ball
b. radiolucent stone
c. urothelial growth
d. upper end of DJ ureteral stent

19) What is true concerning uric acid stones?

a. they are metabolic stones that form at high urinary pH
b. they score 800 – 1000 HU on CT
c. only 25% of affected patients have Gout disease
d. affected patients must stop eating animal protein

20) What condition might NOT cause uric acid stones?

a. Tumor lysis syndrome
b. hypoparathyroidism
c. myeloproliferative disorder
d. Lesch-Nyhan syndrome

21) What is the composition of brushite stones?

a. calcium phosphate
b. calcium oxalate monohydrate
c. sodium urate
d. 2,8 dihydroxyadenine

22) When should renal stone patients be evaluated for metabolic diseases?

a. when stones are multiple and/or recurrent
b. when stones form in childhood
c. cases where nephrocalcinosis and urolithiasis are present
d. all of the above

23) What is (are) the indication(s) of hospitalization of ureteral stone patients?

a. steinstrasse
b. a stone in ureterocele
c. fever, leucocytosis, pain
d. brushite stones

24) A 24-hr urine collection of a recurrent Ca. oxalate stone former patient having Crohn`s

disease might reveal:

a. high citrate, high oxalate
b. low citrate, low oxalate
c. high citrate, low oxalate
d. low citrate, high oxalate

25) How is primary oxaluria treated?

a. terminal ilium resection
b. liver transplantation
c. kidney transplantation
d. regular hemodialysis

26) What type of stones do laxative abusers might develop?

a. ammonium urate
b. sodium urate
c. calcium oxalate
d. calcium phosphate

27) What does nephrocalcin do?

a. dissolves cystine stones
b. enhances nephrocalcinosis process over old scared areas
c. inhibits Ca.oxalate aggregation and crystallization
d. plays a secondary role in metastatic calcification process

28) What bowel surgery could result in enteric hyperoxaluria?

a. right hemicolectomy
b. small bowel resection
c. Roux-en-Y gastric bypass
d. b & c

29) How does oral Mg.citrate inhibit Ca.oxalate stone formation?

a. lowering urinary saturation of Ca.oxalate
b. preventing heterogeneous nucleation of Ca.oxalate
c. inhibiting spontaneous precipitation and agglomeration of Ca.oxalate
d. all of the above

30) When urine reaches a high tendency to form stones, the situation is called:

a. lithogenic anion to cation ratio
b. Randall cut off
c. saturation index
d. solubility product

31) What type of stones is soft, resilient, composed of mucoproteins of urine and serum?

a. matrix
b. indinavir
c. brushite
d. 2,8 dihydroxyadenine

32) What is the principal defect in renal hypercalciuria?

a. impaired renal tubular calcium reabsorption
b. excessive glomerular leak of calcium
c. deficiency of the enzyme xanthine oxidase
d. hypercalcemia

33) Why do patients with cystic fibrosis form stones?

a. because urine and body secretions are highly concentrated
b. due to renal leak hypercalciuria
c. a result of distal renal tubular acidosis type I
d. because of reduced or absent of oxalobacter formigenes colonization

34) The process where nucleation and further precipitations occur by different components to form urinary stones, is called:

a. classical nucleation theory
b. heterogeneous nucleation
c. suspension solution
d. concentric lamination

35) Where do Randall plaques originate from?

a. transitional epithelium lining minor calyces
b. transitional epithelium lining major calyces
c. basement membrane of the loops of Henle
d. papillary tips of polar pyramids

36) What does the treatment of hyperuricemia with urate stones include?

a. oral potassium sodium hydrogen citrate granules
b. increase hydration
c. allopurinol
d. all of the above

37) What is the sure diagnostic finding of Ca.oxalate stones?

a. chemical analysis of a recovered stone
b. hypercalcemia
c. CT finding
d. high breakability on ESWL

38) On treating uric acid stones, excessive alkalinization with potassium citrate could result in all of the following, EXCEPT:

a. formation of triple-phosphate stones
b. infection with Proteus species
c. increase production of endogenous uric acid
d. increase level of uric acid in THE blood

39) What medication(s) could be helpful in the management of cystinuria?

a. α-Mercaptopropionylglycine
b. d-Penicillamine

c. a & b
d. none of the above

40) What medication could help in managing carbonate apatite stones?

a. α-Mercaptopropionylglycine
b. acetohydroxamic acid
c. carbonic anhydrase inhibitors
d. xanthine oxidase inhibitors

41) What is the Hounsfield density range of uric acid stones?

a. 400 – 600 HU
b. 600 – 800 HU
c. 800 – 1000 HU
d. 1000 – 1200 HU

42) What is false concerning recurrent stone formation?

a. best treated by total parathyroidectomy
b. first-time stone formers are at a 50% risk for recurrence
c. males have higher recurrence rate than females
d. stone formers produce stones of the same type every time

43) What is the most important parameter that determines the treatment modality of a kidney stone?

a. stone chemical composition
b. stone burden
c. first stone vs. recurrent
d. stone density

44) What kind of stones is most amenable to ESWL?

a. cystine
b. brushite
c. Ca.oxalate monohydrate
d. Ca.oxalate dihydrate

45) What parameter impairs the kidney stone-free rate, after ESWL?

a. short skin-to-stone distance (SSD)
b. end-stage renal failure
c. a stone in the upper calyx
d. the presence of a 30 cm, 4.7 Fr ureteral stent in situ

46) Which of the following factors, positively, affect lower calyceal stone clearance after ESWL?

a. short and wide infundibulum
b. large lower-pole infundibulo-pelvic angle
c. the adjunct usage of PCNL
d. all of the above

47) Which statement is false concerning renal stones related to hyperparathyroidism (HPT)?

a. renal stones are found in 20% of patients with primary HPT
b. "acidic arrest" promotes crystallisation of calcium phosphate stones related to HPT
c. HPT, vitamin D excess, and malignancy could lead to hypercalcemia and hypercalciuria
d. only surgery can cure primary HPT

48) What parameter is NOT considered in the "stone burden" concept?

a. the surface area of the stones
b. the volume of the stones
c. the density of the stones
d. the number of the stones

49) What metabolic disturbances could result from renal tubular acidosis type I?

a. hypercalciuria and hypocitraturia
b. hypercalciuria and hypercitraturia
c. hypocalciuria and hypocitraturia
d. hypocalciuria and hypercitraturia

50) What could high dietary protein result in?

a. increase urinary calcium, oxalate, and uric acid excretion
b. decrease urinary calcium; but increase oxalate, and uric acid excretion
c. increased urinary calcium and uric acid; but decrease oxalate excretion
d. decreased urinary calcium, oxalate, and uric acid excretion

51) What could high level of sulfate in 24-hr. urine collection mean?

a. dissolving homogenous nucleation
b. high tendency to form cystine sulfate stones
c. indicates the amount of dietary protein
d. post ESWL therapy

52) What is the fatality risk if a triple-phosphate staghorn stone left untreated?

a. 0 – 10%
b. 10 – 20%
c. 20 – 30%
d. 30 – 40%

53) What is the treatment of choice for a 15 mm stone in the lower calyx with a narrow infundibulum?

a. ESWL
b. PCNL
c. radial nephrolithotomy
d. pyelolithotomy with ureteral stenting

54) What is the treatment of choice for a 15 mm stone in a mid calyceal diverticulum?

a. ESWL
b. PCNL with fulguration of the diverticulum
c. ureteroscopy with fulguration of the diverticulum
d. pyelolithotomy with diverticulectomy

55) What type of stones is most effectively treated with PCNL?

a. Ca.oxalate monohydrate
b. cystine
c. matrix
d. Ca.oxalate dihydrate

56) For how long a completely obstructed ureter could be respited with no expected permanent damage to renal functions?

a. 2 days
b. 2 weeks
c. 2 months
d. 4 – 6 hrs.

57) Expectant therapy for ureteral stones is indicated when:

a. stone size of ≤ 4 mm
b. stone burden of ≥ 22 mm
c. there is a distal partial obstruction
d. the patient has end-stage renal failure

58) What is the preferred drug for medical expulsive therapy for lower ureteral stones?

a. furosemide
b. tamsulosin
c. nifedipine
d. diclofenac

59) Which of the following is a *relative* contra-indication to ESWL?

a. renal insufficiency
b. active urinary tract infection
c. uncorrected bleeding disorder
d. third trimester pregnancy

60) What is (are) true concerning ESWL?

a. a stone is fragmented when the force of the shockwaves overcomes the tensile strength of the stone
b. fragmentation occurs as a result of compressive and tensile forces, erosion, shearing, spalling, and cavitation
c. the generation of compressive and tensile forces and cavitation are thought to be the most important
d. all of the above

61) What type of shockwaves is generated by spark-gap technology?

a. piezoelectric
b. electrohydraulic
c. electromagnetic
d. microexplosive

62) Ureteral stones of ≥ 7 mm:

a. should be treated with more analgesics
b. must undergo metabolic worked out
c. are unlikely to pass out spontaneously
d. chemolysis should be tried first

63) Invasive intervention in stone patients is NOT indicated in the following condition:

a. stone size
b. unrelieved obstruction
c. infection and septicemia
d. recurrent stone formation

64) What is (are) the indication(s) of ureteral stenting before ESWL?

a. stones in a solitary kidney
b. ureteral stones causing bilateral obstructions
c. a kidney stone of ≥ 2.5 cm in size
d. all of the above

65) What statement is false concerning the use of desmopressin (DDAVP) in renal colic patients?

a. causes reduction in the mean intra-ureteral pressure
b. reduces the pain of acute renal colic
c. has a direct relaxing effect on the renal pelvis and ureteral musculature
d. is indicated when stones are ≤ 4 mm in diameter

66) What is false concerning the use of antibiotics in stone patients?

a. they are mandatory when urine shows ≥ 10 WBCs/hpf in symptomatic patients
b. they aim at treating pyonephrosis and urosepsis
c. they should cover Escherichia coli and Staphylococcus, Enterobacter, Proteus, and Klebsiella species
d. All of the above

67) What is true concerning the use of intravenous fluids in renal colic cases?

a. patients should be given large amounts of fluids to hasten stones passage
b. fluids are given to keep the patient well hydrated
c. the recommended regimen is 2 L of ringer lactate over 2 hours
d. fluids are contraindicated if desmopressin (DDAVP) was given

68) Two weeks of prolonged wound drainage after a non-stented Anderson-Hynes pyeloplasty. What would be next step in the management?

a. watchful waiting
b. open surgical correction
c. IVU with possible endoscopic ureteral stenting
d. perc. nephrostomy tube insertion

69) What is the immediate management of ureteral avulsion on retrieving an upper ureteral stone by a basket?

a. placement of a percutaneous nephrostomy drain

b. surgical exploration and primary repair
c. conservative management
d. endoscopic retrograde ureteral stenting

70) What is the incidence risk of ureteral strictures following ureteroscopy?

a. 3 – 6 %
b. 12 – 15 %
c. 0.4 – 0.8 %
d. 0.09 – 0.14 %

71) What kind of stones is more likely to recur with infections if not removed completely?

a. urate
b. triple phosphate
c. oxalate monohydrate
d. matrix

72) What is the most appropriate antibiotic class for prophylaxis before urologic surgery?

a. aminoglycosides
b. macrolides
c. cephalosporins
d. fluoroquinolones

73) What is the least serious complications of PCNL?

a. uncontrollable bleeding
b. incomplete removal of stones
c. pneumothorax
d. colonic perforation

74) Which event is unlikely to occur after placing a DJ ureteral stent?

a. can be forgotten in place
b. vesico-renal reflux
c. calyceal perforation
d. detrusor irritability and/or hematuria

75) What is false regarding DJ ureteral stents?

a. can be introduced from the bladder or kidney or any part of the ureter`s course
b. the standard adult size is 32 cm long, 4 mm calibre
c. might result in encrustations and ureteral obstruction
d. might result in ureteral dilation

76) What is (are) the indication(s) of using DJ ureteral catheters?

a. stent the ureter after ureteral surgery
b. facilitate stone passage
c. after a tough ureteroscopy procedure
d. all of the above

77) What is true regarding DJ ureteral stents?

a. can be placed through perc. nephrostomy

b. might slip out, especially in females
c. usually radiopaque
d. all of the above

78) During pyelolithotomy for removing a staghorn urate stone; how to ensure a complete removal of calyceal branches?

a. performing intra-operative ultrasonography
b. performing radial nephrotomies
c. performing adjunct PCLN
d. taking a scout KUB film

79) Which patient is at lowest risk for the development of perinephric hematoma after ESWL?

a. hypertensive patient
b. patient on aspirin withheld 5 days prior to ESWL
c. a stone in a scared poorly functioning kidney
d. ESWL every other day

80) ESWL in pediatric patients is characterized by all of the following, EXCEPT:

a. often need sedation or anesthesia
b. vesico-ureteral reflux must be excluded
c. pediatrics have a higher clearance rate of stones when compared to adults
d. safety measures must be taken to avoid lung contusions

81) What is the least likely condition to form bladder stones?

a. spinal cord injury
b. senile enlargement of prostate
c. augmented bladder
d. neurogenic hyper-reflexive bladder

82) What is false concerning prostatic stones?

a. composed of calcium phosphate and calcium carbonate
b. the vast majority are asymptomatic
c. most of the calculi are found in the transitional zone
d. they don't affect PSA levels

83) What is true regarding prostatic stones?

a. they are multiple and small in size
b. usually, they are voided spontaneously
c. they, rarely, form large stones within the peripheral zone
d. contrast CT is the conventional method for diagnosis

84) Which method of the following stone analysis techniques is based on the interaction of polarized light with the stone crystals?

a. wet chemical analysis
b. thermogravimetry
c. scanning electron microscopy

d. none of the above

85) Which of the following dietary advice is recommended for Ca.oxalate stone formers?

a. limit beef, chicken, pork, eggs, fish, shellfish, and other animal proteins
b. limit beans, nuts, chocolate, coffee, dark green vegetables, and soda
c. limit canned, packaged, and fast foods
d. limit milk, cheese, and other dairy products

86) What is false concerning urethral stones?

a. stones at posterior urethra could be pushed back to the bladder
b. stones at anterior urethra have to undergo a trial of "milking out", using copious intra-urethral xylocaine gel
c. often respond to a two-week course of tamsulosin
d. respond to Holmium laser treatment

87) What is true regarding a stone in a urethral diverticulum?

a. symptomless
b. should undergo a trial of milking out
c. diverticulectomy and stone extraction is the treatment of choice
d. ESWL is the preferred treatment option

88) What is false concerning preputial stones?

a. form due to inspissated smegma
b. form due to stasis of urinary salts
c. cause inguinal lymphadenopathy
d. often associated with phimosis in uncircumcised males

89) What type of urinary diversion carries the highest risk of stone formation?

a. Kock pouch
b. Neobladder-to-urethra diversion
c. Florida pouch
d. Indiana pouch

90) What is false concerning primary bladder stones?

a. commonly occur in patients with senile prostatic enlargement
b. common in children exposed to low-protein, low-phosphate diet
c. rarely recur after treatment
d. respond to ESWL

91) What is false concerning patient`s preparation for PCNL?

a. active UTI is an absolute contraindication
b. fluoroquinolone is the first choice for antimicrobial prophylaxis
c. withholding aspirin for only 10 days is enough
d. despite sterile urine, stone fragmentation might release hidden bacterial endotoxins and viable bacteria

92) How can the effectiveness of ESWL treatment session be enhanced?

a. ensuring optimal coupling of the patient to the lithotripter

b. running the treatment at a slower rate (60 shocks/min)
c. running the treatment with general anesthesia
d. all of the above

93) What could the discomfort experienced during ESWL session be related to?

a. the energy density of the shock waves as they pass through the skin
b. the size of the focal point
c. a & b
d. none of the above

94) What is the unfavorable stone characteristic for a rigid URS treatment?

a. size of 5 mm
b. location at the lower calyx
c. density of 400 HU
d. being recurrent

95) What is the favorable stone characteristic for ESWL treatment?

a. 1000 - 1300 HU density
b. 5 - 10 mm diameter
c. lower calyx location
d. mid ureteral location

96) What is the most favorable stone characteristic for PCNL treatment?

a. ≥ 2 cm diameter
b. upper calyx location
c. Na.urate composition
d. 600 - 800 HU density

97) What is the most favorable stone characteristics for laparoscopic and robotic approaches for the treatment of a kidney stone?

a. a stone in the lower calyx with a wide mouth of infundibulum and obtuse lower calyx to ureter angle
b. a stone in an anterior group calyceal diverticulum with thin overlying renal parenchyma
c. 5 mm calcium-containing stone in an intrarenal pelvis and wide UPJ
d. 6 years post anatrophic nephrolithotomy, recurrent mid calyceal stone

98) What is the first-line treatment of kidney stones of a burden greater than 2 cm?

a. ESWL
b. URS
c. PCNL
d. none of the above

99) What is false concerning neonatal nephrolithiasis?

a. frequently caused by loop diuretics
b. stones are often radiolucent
c. may be reversed by the use of thiazides
d. low calcium-to-creatinine ratio predicts stones resolution

100) What is false regarding hypomagnesuric calcium nephrolithiasis?

a. is characterized by low urinary magnesium and citrate
b. magnesium increases renal tubular citrate resorption
c. diarrheal is a remarkable side effect of magnesium therapy
d. potassium-magnesium preparations might restore urinary magnesium and citrate levels

101) What is the most common composition of ureteral stones?

a. Ca.phosphate
b. Ca.oxalate
c. Na.urate
d. struvite

102) What sequence of ureteral parts represents the most to least favorable stone response to ESWL treatment?

a. upper, lower, mid
b. lower, upper, mid
c. mid, upper, lower
d. mid, lower, upper

103) What is false concerning obesity and urinary stone formation?

a. obese patients have a higher tendency for uric acid stone formation
b. high-protein, low-carbohydrate diet might increase the risk of stone formation and bone loss
c. metabolic syndrome is associated with high urinary pH
d. Roux-en-Y-gastric bypass surgery may increase the risk for stone formation

104) What is true concerning primary hyperparathyroidism and stone formation?

a. orthophosphates may have a role in the treatment
b. hyperparathyroidectomy and levothyroxine replacement is the optimum treatment
c. management includes Calcium chelating agent and repeat 24hr urine collection in 3 months
d. surgical excision of the adenoma(s) is the treatment of choice

105) What is a remarkable disadvantage of ultrasonic imaging for ESWL?

a. localization of stones in the ureter is difficult or impossible
b. inability to visualize stones breaking down in real time
c. patient`s position on ESWL table is uncomfortable
d. inability to visualize radiolucent stones

106) What is the most common organism that might complicate PCNL?

a. Proteus mirabilis
b. E. coli
c. Pseudomonas aeruginosa
d. Staphylococcus epidermidis

107) What is the preferred entry point into the collecting system for PCNL for a 2.4 cm renal pelvis stone?

a. anterior lower pole calyx
b. posterior lower pole calyx
c. anterior upper pole calyx
d. posterior upper pole calyx

108) What could carry the least risk of colon injury during PCNL?

a. subcostal puncture performed during full expiration
b. previous open nephrolithotomy
c. access lateral to the posterior axillary line
d. horseshoe kidney

109) What situation carries lower risk for lung injury during supracostal upper pole access for PCNL?

a. placing the patient in anti-Trendelenburg position
b. making the puncture under local anesthesia
c. injection Co_2 gas to create a safety space under the diaphragm before puncturing
d. making the puncture during full expiration

110) What is the preferred irrigation fluid during PCNL?

a. physiological saline 0.9%
b. glycine 1.5%
c. balanced salt solution
d. distilled water

111) What is false concerning PCNL in horseshoe kidneys?

a. the preferred access into the collecting system is through a posterior calyx
b. the posterior calyceal group is typically more medial than in the normal kidney
c. most cases the lower pole calyces are posterior
d. is desirable to make an upper pole collecting system puncture

ANSWERS TO URINARY CALCULUS DISEASE

1-c self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

2-a the initial step is papillary plaque formation. Other statements describe the free particle theory. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

3-a self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

4-a all of the aforementioned findings are expected but not necessarily found in renal colic patients. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

5-b 85% of urinary calculi are calcium, mainly calcium oxalate. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

6-a commoner in males at all ages because of the high likelihood of bladder outlet obstruction. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

7-d ESWL alone is never enough to treat staghorn stones. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

8-b cysteine stones are of faint opacity. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

9-c cysteine is relatively insoluble in water. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

10-d struvite stones form only at high pH medium. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

11-d all of the aforementioned are urea splitting bacteria. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

12-d even in urate stone patients, refraining from purine products is not recommended. Affected patients should limit dietary proteins to 90 g/d. Moreover, they have to maintain a low purine diet. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

13-b bifid renal pelvis does not result in obstruction, stasis, or repeated infections. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

14-b MAP (struvite) stones are infection stones that respond to antibiotics most. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

15-c thiazides rather help treat hypercalciuria. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

16-c calcium-containing stones are typically radiopaque. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

17-b calcium phosphate is the densest as it has the bone composition. Calcium oxalate follows. Cysteine stones are faint radiopaque, while urate salts are transparent. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

18-d DJ stents are opaque. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

19-c self-explanatory. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

20-b neither hypo nor hyperparathyroidism cause uric acid stones. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

21-a Brushite kidney stones are a unique form of calcium phosphate stones that have a tendency to recur quickly if patients are not aggressively treated with stone prevention measures. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

22-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

23-c signs of obstruction and infection warrant hospitalization. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

24-d enteric hyperoxaluria manifests by intestinal malabsorption, low urinary citrate, and low urine volume. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

25-b hepatic enzymatic deficiency is behind primary hyperoxaluria. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

26-a self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

27-c nephrocalcin is a high molecular weight inhibitor of calcium oxalate crystal growth and aggregation. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

28-d bowel operations that lead to fat malabsorption could account for enteric hyperoxaluria state. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

29-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

30-c chemically it is best described as saturation index. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

31-a the description best fits matrix stones. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

32-a self-explanatory. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

33-d reduced or absent O. formigenes colonization accounts for increasing intestinal oxalate absorption and reduced secretion. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

34-b The process by which nuclei form in impure solutions is called heterogeneous nucleation. The nucleus and the overlying precipitants are, typically, of different matters. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

35-c in idiopathic calcium oxalate stone formers, Randall plaques originate from the basement membrane of the thin loops of Henle. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

36-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

37-a chemical analysis of a recovered stone is the absolute diagnostic finding. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

38-c Excessive alkalization therapy with potassium citrate leads to Increase solubility of uric acid resulting in all of the indicated statements as the dissociation constant of uric acid is exceeded. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

39-c d-Penicillamine and α-MPG are equally effective in decreasing urinary cysteine levels. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

40-b Acetohydroxamic acid (AHA) is a competitive inhibitor of the bacterial enzyme urease that reduces the urinary saturation of carbonate apatite stones. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

41-a self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

42-a parathyroidectomy helps treat only calcium-containing stones. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

43-b stone burden entails stones number, surface area, and volume. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

44-d the sequence of stone breakability from most resistant to most amenable to ESWL therapy is: cystine and brushite, calcium oxalate monohydrate, hydroxyapatite, struvite, calcium oxalate dihydrate, uric acid stones. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

45-b stones in anuric patients don't pass down, thus ESWL is not a suitable treatment option. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

46-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

47-b "acidic arrest" promotes crystallisation of calcium oxalate and urate stones. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

48-c stone density is not a recognized criterion in the concept of stone burden. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

49-a Hypocitraturia, promotes the formation of nephrolithiasis due to reduced impaired inhibition of urinary citrate. Furthermore, hypercalciuria occurs due to the mobilization of calcium from bone. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

50-a self-explanatory. Guyton and Hall Textbook of Medical Physiology, 12th Edition.

51-c sulfate level in a 24-hour urine is an indication of the amount of protein intake. General and Systematic Pathology, 5th Edition; by James Underwood Simon Cross.

52-c the 10-year mortality rate of untreated staghorn stones is 28%. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

53-b the clearance rate with stones at the lower calyx with tight infundibulum is best achieved using PCNL. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

54-b PCNL with fulguration of the diverticulum provides the best chance of stone clearance. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

55-c unlike other listed stones, matrix stones are non-crystalline, thus don't respond to ESWL. PCNL washes it out better than ureteroscopy. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

56-b irreversible loss of renal function does not occur before 2 weeks. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

57-a the majority of ureteral stones of 4 mm or less will pass spontaneously. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

58-b tamsulosin a selective α-adrenergic blocker is the preferred agent. Desk Reference of Clinical Pharmacology, Second Edition, by Manuchair Ebadi.

59-a stone-free rates in patients with renal insufficiency (57%) (serum creatinine level of 2–2.9 mg/dL) were significantly lower than in patients with better renal function (66%) (serum creatinine level < 2 mg/dL). Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

60-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

61-b In an electrohydraulic generator, a high-voltage electrical current passes across a spark-gap electrode located within a water-filled container; the discharged energy produces a vaporization bubble, that expands and collapses, generating a high-energy crushing wave. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

62-c stones < 4 mm in diameter have an 80% chance of spontaneous passage; while stones larger than 8 mm have only 20% chance of passing on their own. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

63-d about 15-20% of patients requires invasive intervention due to stone size, continued obstruction, infection, or intractable pain. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

64-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

65-d indicated in all stone sizes causing renal colic. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

66-d antibiotic use in patients with kidney stones remains controversial; approximately 3% of patients being treated for renal colic develop a new UTI. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

67-b fluids are given to keep the patient well hydrated especially if he/she was vomiting. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

68-c reasonably, IVU with possible endoscopic ureteral stenting is the next step. Open surgery is a remote option. Waiting and PCN are not recommended. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

69-a placement of a percutaneous nephrostomy drain is the immediate management of avulsed ureter. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

70-a 3 – 6 % as per Campbell-Walsh Urology, 11th Edition publication. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

71-b triple phosphate (struvite) stones are infection stones that are more likely to recur with infection. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

72-c Cephalosporins because the most common secondarily infecting organism is S. epidermidis as per Campbell-Walsh Urology, 11th Edition publication. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

73-b self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

74-c calyceal perforation by DJ catheter is not a known complication. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

75-b there is no standard size of DJ stents, as females usually require shorter stents. Furthermore, 4mm is too wide for the ureter. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

76-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

77-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

78-a intra-op. u/s is a non-invasive way to detect remaining stones. Urate stones are typically radiolucent and don't appear on scout KUB. Nephrotomies carry the risk of bleeding. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

79-c a scared poorly functioning kidney is less viable and unlikely to bleed. Every other day ESWL encourages existing small hematomas to get bigger and to open into the perinephric space. Aspirin users have to stop the medication preferably 10 days before the procedure. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

80-b vesico-ureteral reflux, by its self, is not a contraindication for ESWL. Adult and Pediatric Urology,

fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

81-d neurogenic hyper reflexive bladder doesn't usually form stones. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

82-c The majority of stones are found in the posterior and posterolateral zones of the prostate. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

83-a prostatic stones are not voidable. Large stones are rarely found within the central zone. Moreover, as they contain calcium many of prostatic stones are diagnosed by plain KUB. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

84-d the description fits polarization microscopy technique. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

85-b beans, nuts, chocolate, coffee, dark green vegetables, soda, and others are rich in oxalate. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

86-c urethral stones are often obstructing and thus no place for two weeks of respite. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

87-c typically, the diverticulum mouth is too narrow to milk the stone out, and for the residual fragments post ESWL to drain. Surgical excision of the diverticulum and stone extraction is the preferred option for treatment. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

88-c preputial stones cause inguinal lymphadenopathy if skin cancer arose. Moreover, they are associated with severe phimosis in uncircumcised males. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

89-a the Kock pouch has a 4 - 43% incidence of stone formation. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

90-a bladder stones due to BPH are secondary. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

91-b cephalosporin is the first choice for antimicrobial prophylaxis. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

92-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

93-c (a) and (b) are correct. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

94-b stones at lower calyx place an additional challenge to URS treatment. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

95-b 5 – 10 mm diameter is the favorite among the listed criteria. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

96-a $\geq$ 2 cm diameter is the ideal characteristic. No favorability across all density measurements, and intrarenal locations. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

97-b in a version kidney, stones in the anterior calyceal group diverticuli of any size, are the favorite. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

98-c PCNL is first-line therapy for kidney stone burdens 2 cm and greater. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

99-b stones in neonatal nephrolithiasis are calcium-containing and are typically radiopaque. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

100-b Magnesium decreases renal tubular citrate resorption through the chelation of citrate and

therefore increases urinary citrate excretion. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

101-b Ca.oxalate is the most common composition of all urinary stones. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

102-a upper ureteral stones respond to ESWL in 98%, lower respond in 85%, while mid respond only in 70%. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

103-c metabolic syndrome is associated with low urinary pH and thus high tendency to form urate stones. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

104-d surgical excision of the adenoma(s) is the optimum treatment. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

105-a visualizing the ureter and the stones inside is difficult or impossible. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

106-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

107-b posterolateral puncture directed at the lower posterior calyx would traverse through an avascular zone. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

108-b previous open renal surgery might stick the kidney to the lateral abdominal wall making PCNL, technically, easier with least chances of colonic injury. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

109-d full expiration brings up the kidney close to the supracostal access area and pushes the lung and pleura away inside the thoracic cage. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

110-a NaCl normal saline 0.9%. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

111-c In most cases the lower pole calyces are anterior and inaccessible to PCNL. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

UROLOGIC PROBLEMS IN PREGNANCY

Directions: each question has 4 choices, select ONE BEST answer to each question

1) What is false concerning asymptomatic bacteriuria during pregnancy?

a. occurs in 2 – 10% of pregnancies
b. commonly occurs in the first trimester
c. usually, associated with urinary tract abnormalities
d. could progress to serious complications if left untreated

2) What is false concerning asymptomatic bacteriuria during pregnancy?

a. could lead to pyelonephritis, low birth weight, premature labor
b. pregnant women are at higher risk of UTI in weeks 6 throughout 24
c. antibiotics should be culture-based and given, preferably, intravenous in a single shot
d. screening for asymptomatic bacteriuria should begin at first antenatal visit

3) What is the treatment of choice for a moderately symptomatic right ureteral stone in a pregnant woman?

a. conservative management with hydration and analgesics
b. ESWL
c. cystoscopy and DJ ureteral stent insertion
d. perc. nephrostomy

4) What could cause renal cortical necrosis in pregnancy?

a. amniotic fluid embolism
b. disseminated intravascular coagulopathy
c. intrauterine fetal demise
d. all of the above

5) What antibiotic is safe at all stages of pregnancy?

a. nitrofurantoin
b. amoxicillin
c. sulphonamides
d. doxycycline

6) Which of the following states is NOT induced by pregnancy?

a. enteric hyperoxaluria
b. absorptive hypercalciuria
c. hypercitraturia
d. high urinary output

7) What is false concerning radiation exposure to a pregnant woman with a kidney stone?

a. one or two films of IVU are acceptable
b. CT is absolutely discouraged
c. MRI is the diagnostic modality of choice
d. ultrasonography is the safest

8) What is false regarding gestational hydronephrosis?

a. the incidence of dilation is lesser in nulliparous ladies

b. occurs in the second trimester
c. mostly, hydronephrosis disappears on its own in about 6 weeks after delivery
d. commoner in the right ureter

9) What is true concerning hydronephrosis in pregnancy?

a. occurs because pregnancy increases the renal blood flow to up to 75% and approximately 50% increase in the GFR
b. typically, ureteral dilation does not occur below the pelvic brim
c. affects almost 13% of pregnancies by the 26^{th} and 28^{th} weeks
d. always asymptomatic

10) What is true concerning urinary frequency during pregnancy?

a. could be a sign of UTI
b. occurs because the bladder capacity decreases
c. occurs because the renal blood flow increases
d. all are true

11) When should UTI be treated in pregnancy?

a. when a positive urine culture is obtained
b. asymptomatic bacteriuria should be treated
c. catheterized pregnants should not be treated
d. when UTI is recurrent

12) What antibiotic classes are safe and effective throughout pregnancy?

a. aminopenicillins and cephalosporins
b. co-trimoxazole and nitrofurantoins
c. fluoroquinolones and minoglycosides
d. macrolides and clindamycin

13) Among bacteriuria cases in pregnant women, what is the incidence of acute clinical pyelonephritis in untreated cases?

a. 0.5 – 5%
b. 5 – 15%
c. 15 – 25%
d. 25 – 35%

ANSWERS TO UROLOGIC PROBLEMS IN PREGNANCY

1-c finding a structural abnormality is not usual. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

2-c antibiotics should be culture-based and given 3 to 7 days. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

3-a the majority of ureteral stones in pregnancy pass spontaneously. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

4-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

5-b amoxicillin is safe throughout pregnancy. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

6-a pregnancy induces a state of absorptive hypercalciuria, mild hyperuricosuria and increased excretion of urinary citrate and magnesium. In addition to increased urinary output. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

7-c ultrasonography is the diagnostic modality of choice. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

8-a the incidence of dilation is greater in nulliparous ladies. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

9-b typically, ureteral dilation does not occur below the pelvic brim supporting the obstruction theory. It could be symptomatic. It affects almost 90% of pregnancies by the 26th and 28th weeks. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

10-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

11-b all forms of bacteriuria that precede infection should be treated. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

12-a self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

13-d 25-35% as per Stamey study. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

UROLOGIC INFECTIONS AND INFLAMMATIONS

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **Why could pyuria be sterile?**
   a. because standard laboratory culture specifications might not be favorable for growth of atypical organisms
   b. because UTI could show fewer than 10 white cells/mm^3 in urine
   c. because laboratories may not report significant growth of a defined urinary pathogen
   d. all of the above

2) **Which of the following does NOT cause sterile pyouria?**
   a. inadequately treated UTI
   b. renal papillary necrosis
   c. acute emphysematous pyelonephritis
   d. urinary tract tuberculosis

3) **What condition causes sterile pyuria?**
   a. urethral infection with trichomonas vaginalis
   b. bladder infection with adenovirus
   c. Kawasaki's disease
   d. all of the above

4) **What is true concerning bacterial colonization in the bladder?**
   a. always asymptomatic
   b. shows a serological immune antibody response
   c. a common cause of sterile pyuria
   d. typically, at this stage, the body demonstrates bacteriuria

5) **The virulence of uropathogenic E.coli depends on all the following, EXCEPT:**
   a. P blood-group antigen
   b. P fimbriae in descending infections
   c. emolysins
   d. Dr family of adhesins in ascending infections

6) **Asymptomatic bacteriuria should be treated in the following situations:**
   a. the elderly
   b. long-term catheterized patient
   c. pregnancy
   d. none of the above

7) **What could cause unresolved bacteriuria?**
   a. drug resistance
   b. non-compliance
   c. the presence of persistent pathology
   d. all of the above

8) **What is the proper term to describe high bacterial count in urine without pus?**
   a. asymptomatic bacteriuria

b. sterile pyouria
c. bacterial colonization
d. unresolved bacteriuria

9) What is true concerning the treatment of catheter associated bacteriuria?

a. should be flushed frequently, but no antibiotic is advised
b. should be treated if febrile UTI has developed
c. should be treated only if urine culture is positive
d. should be treated once the catheter is removed

10) What could NOT cause recurrent UTI in a 25 yrs. woman?

a. bladder neck suspension surgery
b. chronic constipation
c. poor genital hygiene
d. contraceptive diaphragm

11) What is (are) the cause(s) of recurrent community acquired UTI in women?

a. uncontrolled DM
b. sexual activity with multiple partners
c. high vaginal receptivity to bacterial adherence
d. all of the above

12) What is false regarding malakoplakia?

a. an uncommon granulomatous disease that affect the skin and/or urinary bladder
b. might be due to a disturbed function of B lymphocytes
c. characterized by the presence of basophilic inclusion structure (Michaelis-Gutmann body)
d. might be due to a defective phagolysosomal activity of monocytes or macrophages

13) What is true concerning malakoplakia?

a. a premalignant condition
b. can be locally aggressive and invades surrounding structures causing bone erosions
c. kidneys are the most commonly affected organs
d. characterized by rounded intracellular inclusions (owls-eyes) in large esinophilic histocytes

14) What is (are) the prominent clinical finding(s) in the diagnosis of acute pyelonephritis?

a. fever, chills, abdominal pain
b. costovertibral angle tenderness
c. hypogastric and loin pain
d. flank pain, dysuria

15) What is false concerning acute pyelonephritis?

a. CBC reveals leucocytosis with predominance of neutrophils
b. contrast CT reveals one or more focal wedge-like swollen regions of the kidney parenchyma, sparing the cortex, and demonstrating reduced enhancement "rim sign"
c. children, recurrent acute pyelonephritis might lead to renal scarring

d. pregnancy, recurrent acute pyelonephritis might lead to preterm labor

16) What is true regarding acute pyelonephritis?

a. a cause of obstruction should be sought
b. PCN is placed to decompress the kidney and preserve renal function
c. blood-born staphylococci are commoner than ascending E.coli infections
d. blood and urine cultures must dictate the antibiotic choice from day 1

17) What is false concerning peri-renal abscess?

a. could result from intra-renal abscess of ascending infection
b. urine culture might be negative
c. plain KUB X-ray has no value in the diagnosis
d. surgical drainage is the proper treatment

18) What is true regarding contrast CT imaging for a renal abscess?

a. abscess appears as a low attenuation cystic cavity containing gas
b. renal parenchyma around the abscess cavity may show hypo enhancement in nephrogram phase
c. associated fascial and septal thickening are seen with obliteration of perinephric fat
d. all of the above

19) What is false concerning genitourinary TB?

a. the commonest extra-pulmonary site of infection
b. bladder TB is secondary to renal TB, and usually begins at the ureteral orifices
c. the kidneys, TB is typically bilateral, cortical, and adjacent to the glomeruli; they may remain dormant for ages
d. epididymal TB might occur by hematogenous or direct spread from the urinary tract

20) What is true regarding genitourinary TB?

a. commonly, TB enters the urinary tract via intravesical instillation of attenuated live BCG to treat bladder cancer
b. CT urography may show infundibular stricture with or without hydrocalicosis
c. renal ultrasonography reveals calyceal erosions "moth-eaten calyx"
d. TB of the vas appears, clinically, as a thin hard strictured tube

21) What is false concerning the management of genitourinary TB?

a. prostatic TB is better drained per rectum before initiating the medications
b. renal TB may require nephroureterectomy
c. peripheral neuritis is a known side effect of isoniazid
d. moxifloxacin might result in tendon rupture

22) All of the following etiologies for interstitial cystitis have been theorized, EXCEPT:

a. allergic, type I hypersensitivity response
b. pelvic floor dysfunction
c. up-regulation of histaminergic and muscarinic neuro-receptors
d. neural hypersensitivity

23) Which of the following conditions is NOT associated with interstitial cystitis?

a. inflammatory bowel disease
b. rheumatoid arthritis
c. systemic lupus erythematosus
d. fibromyalgia

24) What is false concerning the cystoscopic findings of interstitial cystitis?

a. Hunner`s ulcers are multiple ulcerative patches surrounded by mucosal congestion on the dome or lateral walls
b. ulcers might get distorted after overdistention, because discrete areas of mucosal scarring rupture during the procedure
c. non-ulcerative type, overdistention demonstrates glomerulations on the dome and lateral walls
d. overdistention results in mucosal tears and submucosal hemorrhage

25) What is false regarding biopsy-taking from interstitial cystitis bladder?

a. pathognomonic histology for interstitial cystitis
b. basically, biopsies are performed to exclude carcinomas and other varieties of cystitis
c. diagnostic biopsies include the presence of discrete micro-ulcers and increased numbers of mast cells in the detrusor muscle or submucosa
d. none of the above

26) How should a proper routine urine specimen be collected?

a. early morning sample, after cleansing the perineum and meatus
b. urethral catheterization under strict aseptic technique
c. a clean catch of midstream voided urine
d. suprapubic aspiration, as urine is sterile

27) What is true regarding honeymoon cystitis?

a. a self-limiting infection where antibiotics are not required
b. exclusively for UTI experienced by a girl after sexual intercourse on her wedding night
c. post-coital voiding has no value in the occurrence of the infection
d. self-initiated medication helps control the infection

28) What does NOT predispose to acute epididymitis is:

a. TUR ejaculatory duct
b. prolonged urethral catheterization
c. prostatic biopsy
d. vas ligation

29) What are the commonest organisms causing acute epididymitis in males younger than 35 yrs.?

a. N. gonorrhea and C. trachomatis
b. E. coli and Pseudomonas species
c. Mycoplasma genitalium and Ureaplasma species
d. Trichomonas vaginalis and Gardnerella vaginalis

30) Management of acute epididymo-orchitis in hospitalized patients includes all of the

following, EXCEPT:

a. scrotal support and elevation
b. ice packs
c. non-steroidal anti-inflammatory agents
d. urethral catheterization

31) What is false concerning epididymitis?

a. should be distinguished from testicular torsion in the emergency setting
b. viral epididymitis is commoner in the elderly
c. chronic epididymitis might complicate BPH
d. chronic epididymitis might require epididymectomy

32) What is NOT a complication of mumps orchitis?

a. infertility
b. hypogonadotropic hypogonadism
c. non seminomatous germ cell tumor
d. chronic orchalgia

33) What is true regarding chronic epididymitis symptomatology?

a. pain is dull aching in the scrotum, perineum, inner thighs, and lower abdomen
b. dysuria, frequency, and/or urgency
c. long-standing (> 6 weeks) history of scrotal pain, and tenderness
d. low grade fever, malaise, and urethral discharge

34) What is true concerning scrotal abscesses?

a. could be a complication of chronic epididymitis and orchalgia
b. testicular torsion must be excluded
c. infected hair follicles and scrotal lacerations are predisposing factors
d. urethral discharge is not uncommon presentation

35) What is false regarding Fournier`s gangrene?

a. defined as a polymicrobial chronic infection of the perineal, perianal, or genital areas
b. the disease progresses, branches from the inferior epigastric, deep circumflex iliac, and external pudendal arteries get thrombosed
c. presents as a dark skinned-scrotum, subcutaneous crepitation, and foul smell
d. surgical debridement often spares the testes

36) Histologically, the pathognomonic finding of Fournier gangrene include:

a. necrosis of the superficial and deep fascial planes
b. fibrinoid thrombosis of the nutrient arterioles
c. polymorphonuclear cell infiltration
d. all of the above

37) What is the likelihood of contracting gonorrheal disease following a single intercourse with an infected woman?

a. 1.7%
b. 7%

c. 17%
d. 71%

38) What is false concerning Chlamydia trachomatis urethritis in males:

a. produces yellow whitish, scanty, frothy urethral discharge
b. shows gram (+), extracellular diplococcic
c. infection could be contracted from the spouse's eyes
d. responds fairly to azithromycin

39) What is false regarding Gonorrheal STD in women?

a. nucleic acid amplification tests are the preferred to diagnose Gonococcal and Chlamydial infections
b. shows dark yellow, purulent, thick urethral discharge
c. the most common site of the infection is the endocervix
d. the incubation period is 2 – 3 weeks

40) What is false in the treatment and prevention of STDs?

a. antibiotic therapy is recommended for affected individuals with documented trichomonal infection and sexual partners even if asymptomatic
b. empirical treatment for gonococcal urethritis should cover chlamydia trachomatis
c. consistent and proper usage of condoms is estimated to prevent HIV transmission by approximately 80 to 95%
d. vaccinations are available for the prevention of human papillomavirus, N. gonorrhea, chlamydia trachomatis

41) What is (are) the complication(s) of sexually transmitted infections?

a. pelvic inflammatory disease
b. lymphogranuloma venereum
c. infertility
d. all of the above

42) What is false regarding Herpes simplex (HSV) infection?

a. characterized by neurovirulence
b. the incubation period of primary genital herpes is 2 – 3 weeks
c. HSV can be isolated in the urine
d. HSV-1 infection causes urethritis more often than HSV-2 does

43) What is true concerning the definition of UTI in women, based on culture results from a suprapubic aspirate of urine?

a. any amount of uropathogen grown in culture indicates UTI
b. for cystitis, more than 1000 CFU/mL indicates UTI
c. for pyelonephritis, more than 10,000 CFU/mL indicates UTI
d. for asymptomatic bacteriuria, more than 100,000 CFU/mL indicates UTI

44) Which of the following is NOT a first-choice antimicrobial agent for uncomplicated acute cystitis in women?

a. nitrofurantoin monohydrate/macrocrystals

b. trimethoprim-sulfamethoxazole
c. ampicillin
d. fosfomycin

45) What is false concerning urinary catheter-associated UTI (CAUTI)?

a. once a catheter is placed, the daily incidence of bacteriuria is 3-10%
b. long-term catheterization, over 90% of patients develop bacteriuria
c. the practice of using urinary catheters to control incontinence in bed-ridden patients should be discouraged
d. urine bags should be placed on the floor to enhance gravity drainage

46) What is NOT a poor clinical practice on caring for urethral catheters?

a. taking urine samples by draining the urine bag
b. daily cleansing the external meatus
c. placing the urine bag on the floor
d. changing the urine bag once it is full

47) What is true regarding urinary catheter-associated UTI (CAUTI)?

a. indwelling catheter insertion must be under sterile condition
b. systemic antibiotics help best in preventing bacteriuria
c. greater than 90% of nosocomial UTIs are related to urethral catheters
d. Intermittent catheterization carries the incidence of 1-3% of developing bacteriuria per insertion

48) What is false about urinary catheters?

a. condom catheters carry less risk of UTI if compared to urethral
b. suprapubic catheters carry less risk of UTI if compared to urethral
c. latex catheters carry less risk of UTI if compared to silicon
d. intermittent catheterization carry less risk of UTI if compared to indwelling catheters

49) What is false concerning esinophilic cystitis?

a. probably due to antibody/antigen reaction
b. has no diagnostic findings on cystoscopy
c. has no specific medical therapy
d. histology, Von Brunn`s nests appear invaginating the urothelium into the lamina propria

50) What is false concerning cystitis glandularis?

a. rarely, the urothelial cell nests show a central lumen lined by glandular epithelium
b. In some cases, it may form polypoid masses that mimic urothelial neoplasms
c. It might appear as multinodular exophytic mass seen on cystoscopy
d. cystitis cystica and cystitis glandularis frequently coexist in the same specimen

51) What is false regarding cystitis cystica?

a. most cysts appear as filling defects on cystography
b. most often found in the trigone area
c. the cyst lumens contain esinophilic secretions that may have a few inflammatory cells
d. cystitis cystica and cystitis glandularis are reactive urothelial changes

52) What is false concerning inverted papilloma of the bladder?

a. It is an endophytic tumor of the transitional urothelium
b. harbors p53 gene mutations
c. presents with hematuria, dysuria, and irritative voiding
d. the lesion requires transurethral resection

53) What is false concerning emphysematous cystitis?

a. the hallmark in the diagnosis is the cystoscopic findings
b. risk factors include transplant recipients
c. CT shows intramural and/or intraluminal gas in the bladder
d. requires surgical debridement and probably cystectomy

54) What is false concerning radiation cystitis?

a. the average time from the beginning of radiation therapy to initial symptoms could be 2 – 4 weeks
b. treatment with stationary radiation, portals carry a higher risk of morbidity than treatment with rotating portals do
c. occurs in about 10% of patients treated with definitive irradiation therapy for prostate cancer after 10 years
d. most cases are mildly affected and require no specific therapy

55) What is false regarding viral cystitis?

a. pediatrics, adenovirus types 11 and 21 could result in hemorrhagic cystitis
b. immunosuppressed children are especially susceptible to Cytomegalovirus and Adenoviruses 7, 21, and 35
c. pediatrics, acute viral cystitis might present as acute retention of urine
d. classically, treatment should be culture-specific

56) What is false regarding schistosomal cystitis?

a. esinophilic immune reaction is generated in response to the eggs
b. chronic schistosomiasis can eventually result in small bladder and the development of cancers
c. schistosoma mansoni often causes urinary tract infections
d. could cause inflammatory polys and recurrent hematuria

57) What kind of non-infectious cystitis, do patients with systemic lupus erythematosus (SLE), likely to develop?

a. cystitis glandularis
b. cystitis cystica
c. esinophilic cystitis
d. cystitis follicularis

58) Ureteral dilation in schistosomiasis could be due to:

a. vesicoureteral reflux
b. stenosis of the lower ureter
c. edematous ureteral wall causing deficient peristalsis

d. any of the above

59) What condition(s) could occur in schistosomal ureter?

a. beading of the lower ureteral segment
b. ureteral fibrosis and calcifications of the distal ureter
c. stricture at the uretero-vesical junction
d. all of the above

60) What is false concerning "foreign body" cystitis?

a. most commonly due to indwelling catheters
b. the areas of inflammation are usually confined to the lateral walls or the dome of the bladder
c. radiographic changes are nonspecific or present as bullous edema
d. indwelling catheters are associated with squamous cell carcinoma of the bladder

61) What kind of cystitis does NOT progress to malignancy?

a. foreign-body cystitis due to vesical calculi
b. Von Brunn`s nests of cystitis cystica and cystitis glandularis
c. schistosomiasis cystitis
d. inverted papilloma of the bladder

62) What is true regarding nephrogenic adenoma of the bladder?

a. results from ectopic nephrogenic blastema cells in the detrusor muscle
b. might undergo malignant transformation in 15 – 40% of the cases
c. cystoscopy, it appears as a bladder mucosal irregularity or large intramural mass
d. the preferred treatment is cystectomy and urinary diversion

63) What could cause scrotal sinus?

a. improperly drained hair follicle scrotal abscess
b. syphilitic orchitis
c. tuberculous epididymitis
d. all of the above

64) In which segmented voided bladder (VB) specimen, the diagnosis of chronic prostatitis is confirmed?

a. VB_1 and VB_3
b. prostatic secretions and the VB_3
c. prostatic secretions and the VB_2
d. prostatic secretions and the VB_1

65) What type of scrotal ulcers is painless, punched out, with yellowish grey floor?

a. tuberculous ulcer
b. malignant ulcer
c. gummatous ulcers
d. traumatic ulcer

66) What condition does NOT present as an acute loin pain with fever and marked flank tenderness?

a. ascending UTI causing acute lobar nephronia
b. acute pyelonephritis in a transplanted kidney
c. infected renal subcapsular hematoma
d. perinephric abscess causing septicemia

67) What is the commonest cause of relapsing UTI in males?

a. chronic epididymitis
b. epididymo-orchitis
c. chronic bacterial prostatitis
d. venereal cysto-urethritis

68) Irritative LUTS and dyspareunia in postmenopausal women are most likely to be due to:

a. giggle incontinence
b. estrogen deficiency
c. cystitis glandularis
d. cystitis cystica

69) What is false regarding "urethral syndrome" in postmenopausal women?

a. of vaginal secretions increases after menopause
b. estrogen deficiency manifests as trophic urethritis and atrophic vaginitis
c. topical conjugated estrogen replacement carries a significant risk of breast and endometrial cancers
d. manifestations might include obstructive symptoms and non-infectious cystitis

70) What is false concerning acute glomerulonephritis?

a. manifested as a sudden onset of hematuria, proteinuria, oliguria, edema, hypertension, and RBC casts in the urine
b. post-streptococcus GN has an incubation period of 1-3 weeks with specific strains of group A beta-hemolytic streptococcus
c. the triad of sinusitis, pulmonary infiltrates, and nephritis, suggests Wegener granulomatosis
d. C_3, C_4, ESR and antistreptolysin O titer are increased

71) What is false concerning Xanthogranulomatous Pyelonephritis?

a. most commonly associated with Proteus or E. coli infection
b. characterized by lipid-laden foamy macrophages
c. the overall prognosis is poor
d. might involve adjacent structures or organs

72) What is true regarding Xanthogranulomatous Pyelonephritis?

a. CT shows the characteristic "bear paw" sign
b. is an infected, obstructed, poorly functioning kidney containing stones
c. nephrectomy is the treatment
d. all of the above

73) When comparing nosocomial to community-acquired UTI, the latter is:

a. 45% are caused by E. coli

b. related to an indwelling urinary catheter in approximately 40% of cases
c. responds fairly to oral antibiotics
d. tends to report higher antibiotic resistance

74) What is false concerning UTI in long-term care facilities?

a. catheterized individuals, entry of bacteria into the bladder is facilitated by the bacterial glycocalyx biofilm
b. infection cannot be reliably distinguished from bacteriuria by lab tests
c. co-trimoxazole is the preferred antibiotic for empiric therapy
d. symptomatic UTI may be a diagnosis of exclusion

75) What is false concerning post UTI renal scarring in pediatrics?

a. the incidence of scarring following a single episode of febrile UTI is 4.5%
b. intra-renal reflux is common in convex papillae
c. scarring and chronic pyelonephritis lead to hypertension in 10-20%
d. scarring is best detected and followed up by DMSA

76) What is false regarding pediatric renal parenchyma scarring?

a. chronic pyelonephritis and HTN lead to ESRD in 10% of the cases
b. neonatal symptoms of UTI are vague and non-specific, that delay the diagnosis and end in more scarring
c. despite adequate treatment, scarring continues after an attack of pyelonephritis as a chronic immune reaction against renal tubules
d. neonates have low intrarenal pelvic pressure, that predisposes to ascending infections

77) What is true concerning "ovarian vein syndrome"?

a. manifests as recurrent renal colics due to ureteral obstruction
b. treatment is surgical mobilization of ureter and ligation of the vein
c. commonly, occurs at the left side
d. the pain worsens on sitting upright and during pregnancy

78) What is false concerning "chronic orchialgia syndrome"?

a. is a constant or intermittent pain of testes for more than 3 months
b. could be due to appendix testis torsion-detorsion
c. could be due to radiculitis resulting from a degenerative lesion in the thoraco-lumber vertebrae
d. could be a result of entrapment neuropathy of ilioinguinal or genitofemoral nerve

79) What is false regarding the etiology and treatment of orchialgia syndrome?

a. small indirect inguinal hernia may irritate the genital branch of genitofemoral nerve causing orchialgia
b. might respond to a selective nerve block
c. the recommended treatment is orchiectomy with implantation of a testicular prosthesis
d. psychotherapy and stress management might alleviate the pain

80) What is true regarding balanoposthitis?

a. best diagnosed by ascending urethrography

b. occurs mostly in diabetic and immunosuppressed patients
c. could be due to maceration injury, irritant dermatitis, or Candida
d. commonly presents with deep inguinal lymphadenopathy

81) What are the sequelae of recurrent uncomplicated UTI in young women?

a. minimal
b. chronic persistent infections
c. chronic relapsing infections
d. bouts of chronic pyelonephritis

82) What is the percentage of occurrence of Staphylococcus saprophyticus in symptomatic lower UTIs in young sexually active females?

a. 5%
b. 10%
c. 15%
d. 20%

83) What is the least important measure in indwelling catheter care?

a. cleansing the urethral meatus with aseptic agent
b. careful aseptic insertion of the catheter
c. maintenance of a closed drainage system
d. maintaining a dependant drainage system

84) What is the most virulent factor for bacterial adherence?

a. P blood group
b. fimbria
c. pili
d. hemolysin

85) What is the most significant biological difference in women susceptibility to UTI?

a. adherence of bacteria to vaginal cells
b. vaginal dryness
c. O serogroup
d. vaginal pH

86) What is the bladder`s first-line defense against infections?

a. natural sloughing of bladder mucosa
b. voiding
c. urine osmolarity
d. urine pH

87) What is the most significant complication of papillary necrosis?

a. ureteral obstruction
b. proteinuria
c. stone formation
d. renal scarring

88) Screening for bacteriuria is mostly indicated for:

a. seniors' house residents
b. ICU patients with indwelling urinary catheters
c. pregnant women
d. neurogenic bladder patients on CIC

89) No need for radiologic studies for recurrent UTI in:

a. children
b. the elderly
c. men
d. women

90) What is the most important pharmacokinetic property of a drug to cure UTI?

a. mode of administration
b. level in the serum
c. level in the urine
d. dosage

91) What is the mortality rate of emphysematous pyelonephritis?

a. 43%
b. 53%
c. 63%
d. 73%

92) What are the most indicative symptoms of chronic pyelonephritis?

a. fever and chills
b. suprapubic pain and pyuria
c. flank pain and tenderness
d. none of the above

93) What is the earliest clinical finding of urosepsis?

a. elevated body temperature
b. dropped blood pressure
c. elevated heart rate
d. reduced urine output

94) A 44 yrs. male presents with recurrent left pyelonephritis and Proteus infection. His kidney is dilated and contains a stone. A renal biopsy showed foamy macrophages with neutrophils and cellular debris. What is the treatment?

a. PCNL after treating the infection
b. cystoscopy and placing a retrograde ureteral stent followed by ESWL
c. perc. nephrostomy and placing antegrade ureteral stent
d. nephrectomy

95) A 48 yrs. woman presents with recurrent cystitis. Cystoscopy showed a raised bladder lesion. Biopsies from the lesion reveals Von Hansemann histiocytes, and Michaelis-Gutmann bodies. What is the treatment?

a. sulfonamide for several months

b. TUR of the bladder lesion followed by proper staging
c. radical cystectomy and urinary diversion
d. intravesical installation of mitomycin without irradiation

96) What is the ideal antibiotic class for self-start therapy on treating recurrent cystitis in a 32 yrs. married woman?

a. aminopenicillins
b. fluoroquinolones
c. aminoglycosides
d. nitrofurantoins

97) What antimicrobial agent treats UTI and does NOT alter the gut flora?

a. trimethoprim- sulfamethoxazole
b. fluoroquinolones
c. aminoglycosides
d. nitrofurantoins

98) What group of patients should be treated for UTI only when symptomatic?

a. patients with indwelling catheters
b. neurogenic bladder patients on CIC
c. pregnant women
d. children under 5 years

99) As per NIH classification of prostatitis, which type requires no treatment?

a. type I
b. type II
c. type III
d. type IV

100) A 60 yrs. man underwent TURP for, only, obstructive LUTS. Histology of prostate chips reveals prostatitis. What NIH type of prostatitis would it be?

a. type I
b. type II
c. type III
d. type IV

101) Directed physiotherapy could be of value in treating what NIH type of prostatitis?

a. type II
b. type III-a
c. type III-b
d. type IV

102) What is true concerning granulomatous inflammation of the prostate?

a. a common cause of elevated PSA level
b. might follow BCG treatment
c. sequelae of untreated type III-b prostatitis
d. shows homogenous enhancement following Gd-DTPA on prostate MRI

103) What is the laboratory differentiation between type III-a and type III-b prostatitis?

a. the cytological examination of the urine and/or EPS
b. transrectal ultrasonographic examination
c. the presence of ≥10 WBCs/HPF in the urine with negative culture in type III-b
d. the positive urine culture, and negative EPS support type III-a

104) What is false concerning the presentation of prostatitis syndrome?

a. type I could harbor prostate abscess
b. type II presents as intermittent urinary tract infections
c. type III-a presentation might include psychological complaints
d. between 10-15% of men with type IV, have pus cells in their semen but no symptoms

105) Which of the following has NO role in bacterial colonization in the prostate?

a. intra-prostatic ductal reflux
b. paraphimosis
c. specific blood groups
d. unprotected anal intercourse

106) What factor(s) increase(s) the risk of bacterial colonization in the prostate?

a. acute epididymitis
b. indwelling urethral catheters
c. transurethral surgery
d. all of the above

107) UPOINT system for phenotype categorization:

a. categorizes CP-CPPS, IC, and painful bladder syndrome based on 5 etiological principles
b. meant to classify CP-CPPS and IC patients into 6 domains
c. helps establish a reliable diagnosis of CP/CPPS or IC
d. the diagnostic scores of UPOINT depend on cystoscopy, TRUS, urine analysis and culture of uncommon microbes

108) Which treatment modality has NO proven efficacy in CP/CPPS?

a. selective nerve block
b. balloon dilation
c. botulinum A toxin injection
d. ESWL

109) What is false concerning Brucellosis epididymitis?

a. commonly presents with scrotal pain, swelling, fever, and leucocytosis
b. epididymo-orchitis is the most frequent genitourinary complication of brucellosis
c. epididymo-orchitis occurs in 10-15% of male patients with brucellosis
d. treatment includes doxycycline and rifampicin for 6-8 weeks

110) What is the most commonly affected organ by genitourinary Brucellosis?

a. kidneys
b. bladder

c. prostate
d. epididymis

111) What are the most commonly affected organs by genitourinary schistosomiasis?

a. kidneys and adrenals
b. bladder and ureters
c. prostate and vasa
d. testes and epididymi

112) What are the most commonly affected organs by genitourinary tuberculosis?

a. kidneys, prostate and epididymi
b. bladder, ureters and renal pelvis
c. vasa, scrotum and adrenals
d. testes, bladder neck and seminal vesicles

113) What is false regarding prostatic abscesses?

a. clinically, cannot be differentiated from acute bacterial prostatitis
b. medical management is often unsuccessful
c. harbors prostate cancer in approximately 4.3 % of cases
d. management include suprapubic urinary diversion

114) Using low-dose prophylactic or suppressive antimicrobials might be an option in treating the following type of prostatitis:

a. acute bacterial prostatitis presenting with abscess formation
b. recurrent or refractory chronic bacterial prostatitis
c. asymptomatic prostatitis with pyuria resistant to common antimicrobials
d. curiously, chronic inflammatory prostatitis could respond to low-dose suppressive antibiotic

115) What is false concerning corpora amylacea of the prostate?

a. are premalignant, and found in 1-6% of prostate biopsies
b. are small hyaline masses of unknown significance found in the prostate gland
c. they are degenerate cells or thickened secretions in the prostate ducts
d. might appear as prostate calcifications on X-ray KUB

116) Patients with "bladder pain syndrome" have:

a. a history of repeated urologic and/or gynecologic procedures
b. 10 fold higher incidence of childhood voiding problems
c. 4 fold higher incidence of anxiety-depression syndrome
d. 6 fold higher incidence of psychosomatic disorders

117) What is essential on diagnosing bladder pain syndrome BPS/IC?

a. sterile pyuria on 3 consecutive cultures
b. the presence of glomerulations and/or Hunner`s ulcer on endoscopy
c. pain and discomfort related to the bladder
d. urgency and frequency with no documented infection

118) What is the best statement that describes the action of antiproliferative factor?

a. inhibits bladder epithelial cell proliferation
b. inhibits the bladder proliferative growth factors
c. stimulates the proliferation inhibitory factors
d. none of the above

119) What type of bladder cells secretes antiproliferative factor?

a. bladder epithelial cells
b. type C nerve endings in the bladder
c. type A delta nerve endings in the bladder
d. the innermost longitudinal fibres of detrusor muscle

120) What is the average age of onset of BPS/IC patients?

a. 30
b. 40
c. 50
d. 60

121) What is the preferred antibiotic for BPS/IC cases?

a. rifampicin
b. doxycycline
c. azithromycin
d. none of the above

122) What type of cells is implicated most in the pathogenesis of BPS/IC?

a. histocytes
b. T lymphocytes
c. mast cells
d. B lymphocytes

123) What is true concerning BPS/IC?

a. the onset of symptoms is insidious
b. the lesion has no proven relation to bladder cancer
c. left untreated, the bladder will turn small, contracted, with submucosal calcifications
d. a single positive urine culture refutes the diagnosis

124) What are the diagnostic findings on cystometrogram for BPS/IC?

a. discomfort on placing urethral catheter and pain on bladder filling
b. difficulty in zeroing the pressure and diminished response to first cough
c. low filling pressure but high voiding pressure
d. uninhibited bladder contractions with a relative bladder hypotonia

125) Which of the following is NOT a treatment option for BPS/IC?

a. substitution cystoplasty and continent diversion
b. fulguration of a Hunner`s ulcer or hydrodistention
c. intravesical installation of silver nitrate or dimethyl sulfoxide
d. low dose external beam irradiation

126) What is false concerning HIV infection?

a. AIDS patients in active infection show low CD_4 + T-cell count
b. the diagnosis is confirmed by positive anti-HIV-1, anti-HIV-2 antibodies
c. patients receiving antiviral therapy could still be infectious
d. herpes simplex virus increases HIV replication in infected persons

127) What is true concerning HIV infection?

a. HIV is a retrovirus that infects B-cells and dendritic cells
b. circumcised men are at lower risk for HIV infection
c. HPV infection increases the risk for cancers in HIV patients by 6.3 times
d. plasma HIV RNA load is a predictor of disease remission

128) What is the commonest intra-scrotal pathology in AIDS patients?

a. beaded vas deferens
b. testicular micrilithiasis
c. testicular atrophy
d. epididymal granuloma

129) What type of human Herpes virus is implicated in all forms of Kaposi sarcoma?

a. 2
b. 6
c. 7
d. 8

130) What is the estimated risk of untreated Chlamydial infections in producing pelvic inflammatory disease?

a. 1 – 2.7%
b. 5 – 9%
c. 10 – 27%
d. 30 – 47%

131) What is false concerning antiretroviral medications?

a. multiple antiretroviral drugs can be combined into a single pill
b. might cause radiolucent renal stones
c. can lead to a significant rise in the serum level of PDE5 inhibitors, if taken simultaneously
d. have the advantage of "structured treatment interruptions" (drug holidays)

132) HIV infection increases the incidence of the following cancers, EXCEPT:

a. Kaposi sarcoma,
b. Hodgkin lymphoma
c. non-Hodgkin lymphoma
d. cervical cancer

133) In males, HIV infection increases the incidence of the following genitourinary tumors:

a. testicular
b. renal
c. penile

d. all of the above

134) What is the most common serotype of HPV associated with squamous cell carcinoma of the penis?

a. 16
b. 18
c. 22
d. 12

135) Epididymal cysts are common in the following conditions, EXCEPT:

a. von Hippel-Lindau disease
b. tuberous sclerosis
c. cystic fibrosis
d. autosomal dominant polycystic kidney disease

136) During the initial 3-month period of HIV infection, what would be the best diagnostic lab test?

a. viral load assay
b. western blot analysis
c. southern blot analysis
d. HIV-1/HIV-2 serology assay

137) What are the target immune cells for HIV?

a. phagocytes
b. CD_4 T cells
c. B lymphocytes
d. natural killer cells

138) The relative risk of prostate cancer in men with HIV compared to uninfected individuals is:

a. greater than 8 fold
b. greater than 6 fold
c. greater than 4 fold
d. comparable

139) What virus(s) could cause orchitis?

a. Coxsackie B
b. Epstein-Barr
c. varicella
d. all of the above

140) What condition is associated with renal papillary necrosis?

a. nephrotic syndrome
b. hypertension
c. sickle cell hemoglobinopathy
d. sarcoidosis

141) Which of the following conditions does NOT cause bacterial persistence?

a. perivesical abscess with fistula to bladder
b. acute tubular necrosis
c. renal papillary necrosis
d. xanthogranulomatous pyelonephritis

142) What host`s factors do NOT increase the risk of developing infections?

a. advanced age
b. anatomical anomalies
c. poor drug compliance
d. smoking

143) Which of the following factors increases the risk of UTI due to promotion of microbial colonization?

a. neurogenic bladder
b. the use of spermicide
c. urinary catheterization
d. fecal incontinence

144) Which of the following factors increases the risk of UTI due to facilitation of microbial ascent?

a. sexual activity
b. the use of spermicide
c. estrogen depletion
d. fecal incontinence

145) Which of the following does NOT cause unresolved bacteriuria?

a. giant staghorn stone
b. perivesical abscess with fistula to the bladder
c. bacterial resistance
d. self-inflicted infection

146) Which statement best defines "reinfection"?

a. a new episode of UTI caused by different species or occurring at long intervals
b. recurrent UTIs caused by the same organism in each instance, classically, at close intervals
c. recurrent UTIs due to failure of medical therapy to eradicate the infection
d. recurrent UTIs due to a persistent pathology that is obstinate to surgery

147) What is false concerning renal hydatid cysts?

a. might rupture into the collecting system causing (hydatiduria)and renal colic
b. are formed by the eggs of the tapeworm Echinococcus granulosus
c. most cysts are asymptomatic but might manifest as flank mass, dull pain, or hematuria
d. the most reliable diagnostic test uses partially purified hydatid arc 5 antigens in a double-diffusion test

148) What is false concerning "sepsis syndrome"?

a. poor tissue perfusion manifests as hyperlactemia and decreased capillary refill

b. acute oliguria indicates an organ dysfunction and circulatory collapse
c. septic shock is an extreme form of sepsis when hypotension persists despite adequate fluid resuscitation
d. hypotension is a sign of hyperdynamic circulation at an early septic shock

149) What is the preferred antimicrobial prophylaxis for transrectal prostate biopsy?

a. aminoglycoside
b. fluoroquinolone
c. 2nd generation cephalosporin
d. doxycycline

150) Under which surgical wound classification, does diagnostic cystoscopy under sterile technique fit?

a. dirty - infected
b. contaminated
c. clean - contaminated
d. clean

151) A 40 yrs. man presents with clinical acute pyelonephritis, on intravenous antibiotics for 4 days, CT shows a renal abscess. What is next in the treatment?

a. carry on the full antibiotic course, and then repeat CT
b. incision and drainage of the renal abscess with/without nephrectomy
c. the abscess size dictates management
d. perc. drainage of the renal abscess

ANSWERS TO UROLOGIC INFECTIONS AND INFLAMMATIONS

1-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

2-c acute pyelonephritis is commonly caused by microbes that test positive on routine bacterial cultures like E. coli which is isolated in 66% of patients, and Klebsiella species in 26% of patients. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

3-d infections of parasitic, viral, autoimmune etiology could result in sterile pyuria. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

4-a colonization stage is asymptomatic. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

5-b P fimbriae in ascending infections. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

6-c although symptomless, bacteriuria during pregnancy should be treated. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

7-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

8-c by definition, bacterial colonization shows high bacterial count in urine with no pus. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

9-b treatment of catheter-associated bacteriuria is indicated only if fever and chills has developed. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

10-a poor hygiene and wearing the diaphragm could increase the risk of community acquired UTI. Constipation indicates that the rectum is full with enteric bacteria that could move out and colonize at the perineum and thus get an access to the urethra. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

11-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

12-b the incidence of malakoplakia in immunocompromized states, suggests that a disturbed function of T-lymphocytes may play a role in the pathogenesis. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

13-b despite the lesion is benign; it can be locally aggressive and invades surrounding structures causing bleeding and bone erosions. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

14-b costo-vertebral angle tenderness on fist percussion is diagnostic for acute pyelonephritis beside the suggestive symptoms. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

15-b contrast CT reveals one or more focal wedge-like swollen regions of the renal pelvis and parenchyma including the cortex; demonstrating reduced enhancement. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

16-a PCN has no role in acute pyelonephritis. Ascending infections by e.coli are more common than blood-born staph. infections. Empirical antibiotics must be started from day 1 until culture results appear. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

17-c plain X-ray KUB often shows a mass effect, scoliosis with concavity towards the affected side, renal size may enlarge, and psoas muscle shadow might be lost. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

18-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

19-a the commonest extra-pulmonary TB is the lymph nodes. Campbell-Walsh Urology, 11th Edition, by Alan J.

Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

20-b CT urography shows a series of changes based on the infection stage. Renal TB may show infundibular stricture with or without hydrocalicosis. Moreover, calyceal erosions "moth-eaten calyx" might appear. Rarely, TB enters the urinary tract via intravesical instillation of attenuated live BCG to treat bladder cancer. TB of the vas appears as a thick hard beaded cord. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

21-a draining active TB infection is discouraged as it helps spread of the infection and the formation fistula tract. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

22-a allergic type I is an immediate anaphylactic immune response. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

23-b IC is known to be associated with inflammatory bowel disease, systemic lupus erythematosus, irritable bowel syndrome, fibromyalgia, and atopic allergy. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

24-b ulcers may become apparent only after overdistention. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

25-c no pathognomonic histology is present for interstitial cystitis. Basically, biopsies are performed to exclude carcinomas and other varieties of cystitis. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

26-c routinely, a clean catch of midstream voided urine is adequate. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

27-d self-initiated medication entails taking the antibiotic treatment only before intercourse on a half-filled bladder. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

28-c prostatic biopsy is usually obtained per rectum and carries no risk of developing epididymitis. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

29-a N. gonorrhea and C. trachomatis are the commonest for ≤ 35 yrs. whereas for older patients, E. coli and Pseudomonas species are commoner. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

30-d urethral catheterization and instrumentation should be avoided. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

31-b viral epididymitis is commoner in pediatrics. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

32-c mumps orchitis does not predispose to malignancy. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

33-c long-standing epididymitis for greater than 6 weeks turns it chronic. Typically, there is a history of scrotal pain and tenderness. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

34-c scrotal wall abscess could be a result of infected hair follicles or scrotal lacerations. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

35-a FG is defined as a polymicrobial necrotizing fasciitis of superficial and deep layers of the perineal, perianal, or genital areas. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

36-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

37-c 17% following a single exposure. The rate shoots up to 60% after 4 exposures. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

38-b Chlamydia trachomatis is a gram-negative bacterium. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

39-d incubation period of gonococcal infection is 2-7 days. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

40-d Vaccinations are available for the prevention of human papillomavirus, and N. meningitidis. To date, no vaccines are available for gonorrhoeal and chlamydial infections. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

41-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

42-b the incubation period of primary genital herpes is 3-7 days. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

43-a as urine in the bladder is supposedly sterile, any amount of uropathogenic grown in culture from a suprapubic aspirate should be considered evidence of a UTI. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

44-c ampicillin has fallen out of choice based on the emergence of bacterial resistance. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

45-d placing the urine bag on the floor carries more risk of infection through the bag`s valve. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

46-b despite daily cleansing the external meatus is not highly recommended, it is not a bad practice. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

47-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

48-c silicon catheters carry less risk of UTI if compared to latex. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

49-d bladder biopsy shows abundance of esinophilic infiltrates. Von Brunn`s nests are typically diagnostic for cystitis glandularis. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

50-a typically, the urothelial cell nests show a central lumen lined by glandular epithelium. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

51-a cysts in cystitis cystica are microscopic findings. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

52-b typical inverted papillomas show no immunohistochemical positivity to p53 gene. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

53-a the diagnosis is based on the clinical and radiological findings. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

54-a the average time from the beginning of radiation therapy to initial symptoms could be several months to several years. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

55-d viral cultures are not classically indicated. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

56-c Schistosoma haematobium often causes urinary tract infections. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

57-c autoimmune diseases such as systemic lupus erythematosus could result in esinophilic cystitis. It is characterized by transmural inflammation of the bladder predominantly by eosinophils. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

58-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

59-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

60-b the areas of inflammation are usually confined to the posterior wall or the floor of the bladder. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

61-b Von Brunn`s nests of cystitis cystica and cystitis glandularis are benign. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

62-c it appears as a bladder mucosal irregularity and/or large intramural mass resembling a carcinoma. A biopsy is normally required to confirm the diagnosis. Once confirmed, nephrogenic adenoma is a benign condition. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

63-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

64-b bacterial prostatitis is confirmed by the presence of bacteria in the prostatic secretions and in the VB_3 (post-prostatic massage) urine sample in numbers greatly exceeding the bacterial counts of the VB_1 and VB_2 urine samples. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

65-c neurogenic and gummatous ulcers (occurs in tertiary syphilis), fit the described criterion. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

66-b transplanted kidneys are denervated. Thus, they don't perceive flank pain and tenderness. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

67-c self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

68-b estrogen deficiency in postmenopausal women causes atrophic urethritis manifesting as described in the question. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

69-c topical estrogen replacement doesn`t carry a significant risk of breast and endometrial cancers. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

70-d C_3 and C_4 decrease, while ESR and antistreptolysin O titer increase. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

71-c despite XGP is a benign lesion, it might invade adjacent organs. Nevertheless, the overall prognosis is good. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

72-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

73-c community-acquired UTI responds to oral antibiotics, has low antibiotic resistance, typically not catheter-related, and caused by E.coli in 85% of the cases. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

74-c fluoroquinolones are the preferred antibiotics for empiric therapy. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

75-b Intra-renal reflux is common in concave compound papillae that are abundant at the 2 poles. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

76-d neonates have a high intrarenal pelvic pressure that is once contracted leads to intrarenal reflux. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

77-b it is more common on the right side. The pain is usually dull aching; rarely resents as colics. It worsens on lying down and between ovulation and menstruation. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

78-b the probabilities of appendix testis torsion detorsion have not been proposed. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

79-c the surgical option is not at a recommendation level. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

80-c self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

81-a no significant repercussions have been reported on the long term. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

82-b 10%. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

83-a cleansing the urethral meatus is not at a recommendation level. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

84-c studies have shown that pili are the most significant. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

85-a self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

86-b however microbes enter the bladder, the impaired ability of the bladder to empty makes the most significant breach in the natural bladder defence. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

87-a sloughed necrotic renal papillae may obstruct the ureter. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

88-c pregnant ladies with asymptomatic bacteriuria are the most significant class of patients. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

89-d studies showed that most recurrent uncomplicated UTIs in women reveal no radiological abnormalities. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

90-c the therapeutic level of the drug in the urine is the most important to eradicate the infection. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

91-a the overall mortality rate is 43%. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

92-d chronic pyelonephritis is commonly asymptomatic. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

93-c tachycardia is the first finding of sepsis of any origin. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

94-d the diagnosis is xanthogranulomatous pyelonephritis. Nephrectomy is the treatment. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

95-a the diagnosis is malakoplakia. Sulphonamide for several months is the preferred treatment. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

96-b because they cover a broad spectrum of bladder infections. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

97-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

98-a patients with indwelling catheters rapidly develop antibiotic resistance if treated based on culture alone. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

99-d by definition, type IV asymptomatic prostatitis requires no treatment. Adult and Pediatric Urology, fourth

edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

100-d as the pre-operative symptoms were only obstructive because of BPH, asymptomatic prostatitis is type IV. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

101-c type III-b (non-inflammatory CP/CPPS) benefits from physiotherapy. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

102-b BCG treatment might result in tuberculous granulomatous prostatitis. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

103-a self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

104-c type III-b presentation might include psychological complaints pertaining to anxiety, stress, and depression. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

105-b paraphimosis has no role, while phimosis does. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

106-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

107-b self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

108-b balloon dilation has no proven effect. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

109-a leucocytosis is not a common feature of brucellosis. It is detected in only 18% of patients. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

110-d the highest reported incidence is epididymo-orchitis, occurring in 10-15% of male patients with brucellosis. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

111-b Schistosoma hematopium, overly, resides in the bladder and lower ureters. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

112-a among the indicated collection; kidneys, prostate, and epididymi are the commonest. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

113-c prostate cancers have no relation to abscess formation. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

114-b in chronic bacterial prostatitis the microbe could hide for a long time, flaring with acute infections at different time intervals. Affected patients may benefit from low-dose prophylactic or suppressive antimicrobials. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

115-a corpora amylacea is amyloid in pathology and benign in nature. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

116-b patients with BPS have 10 fold higher incidence of childhood voiding problems. Psychological disorders are overrepresented in this group of patients. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

117-c pain and bladder discomfort are essential in diagnosing BPS. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

118-a self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

119-a self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

120-b 40 yrs. is the average. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

121-d BPS/IC does not respond to antibiotics. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD,

John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

122-c mast cells. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

123-b no association or causation relationship has ever been shown between BPS and the development of bladder carcinoma. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

124-a self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

125-d radiotherapy is not an option for treating BPS/IC. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

126-b the diagnosis is confirmed by western blot analysis. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

127-b male neonatal circumcision lowers the risk of HIV infection. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

128-c self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

129-d human Herpes virus 8 is essential for all forms of Kaposi sarcoma. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

130-c untreated chlamydial infection might produce pelvic inflammatory disease in 9.5% and 27% of cases. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

131-d drug holidays (or "structured treatment interruptions") are intentional discontinuations of antiretroviral drug treatment. Studies have shown that this regimen carries higher rates of opportunistic infections, cancers, heart attacks and death. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

132-b self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

133-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

134-a the most common serotype associated with squamous cell carcinoma of the penis is HPV_{16}. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

135-b tuberous sclerosis. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

136-a during the "window" period, antibody tests could be negative while the person is infected. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

137-b T-lymphocyte receptor CD_4. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

138-d The reported relative risk of prostate cancer in men with HIV is less than 0.70. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

139-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

140-c sickle cell disease and trait could cause renal papillary necrosis. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

141-c ATN doesn`t cause bacterial persistence. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

142-c poor drug compliance doesn`t help eradicate the infection when it is active, but doesn`t increase the risk of developing new infections. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

143-b the use of spermicide increases the binding of microbes to urothelium in a way of promoting colonization. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

144-d fecal incontinence causes perineal soil and promotes ascending infections. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

145-b perivesical abscess with fistula to bladder causes bacterial persistence rather than unresolved bacteriuria. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

146-a self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

147-b hydatid cysts are formed by the larva stage of the tapeworm Echinococcus granulosus. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

148-d hypertension is a sign of hyperdynamic circulation at early septic shock. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

149-b fluoroquonilone. The alternate is co-trimoxazole. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

150-c with controlled entry into the urinary system, no break in sterile techniques, and no spillage of urine outside the urinary tract, diagnostic cystoscopy is clean- contaminated. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

151-c the abscess size dictates management. Abscesses of 3 cm or less can be managed with antibiotics alone. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

SENILE ENLARGEMENT OF THE PROSTATE

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **What is true concerning epithelial and stromal cells in BPH?**
   a. there is an increase in the number of epithelial and stromal cells
   b. there is an increase in the size of epithelial and stromal cells
   c. BPH, epithelial to stromal cells ratio is 1:2
   d. all of the above

2) **What is false concerning BPH and androgenic hormones?**
   a. the most potent androgenic hormones in BPH development is DHT
   b. type-2 steroid 5 α-reductase, is most commonly found in the prostate
   c. castrated individuals before puberty will not develop BPH
   d. a man ages, the number of androgen receptors in the prostate decreases

3) **What is true regarding BPH and androgens?**
   a. a man ages, the responsiveness of prostate cells to androgenic stimuli decreases
   b. adrenal androgens have no role in BPH development
   c. type-1 steroid 5 α-reductase is functionally active in the hair follicle
   d. all of the above

4) **What is false concerning bladder and prostate histology in BPH?**
   a. obstruction results in bladder smooth muscle hypertrophy and myofibroblasts deposition
   b. BPH occurs chiefly in the transitional zone and periurethral tissues
   c. BPH microscopical changes begin in early thirties
   d. histologic findings of chronic prostatitis are common in BPH

5) **What is false regarding BPH genetics?**
   a. BPH is an inheritable and progressive disease
   b. familial BPH presents at an older age when compared to sporadic cases
   c. approximately 90% of men in their 80s have histologic evidence of BPH
   d. BPH tends to be more severe and progressive in black men when compared to whites

6) **What class(es) of medications decrease(s) IPSS questionnaire points?**
   a. calcium channel blockers
   b. antihistamines
   c. antidepressants
   d. cold medications containing pseudoephedrine

7) **What is false concerning IPSS questionnaire?**
   a. specific for prostate symptom
   b. a seven-question, self-administered questionnaire that yields a total score that ranges from 0 to 35
   c. a sum of 20 on IPSS scale is “severe”
   d. covers both voiding and storage symptomatology

8) **What is (are) true concerning IPSS questionnaire?**
   a. focuses on last month`s symptoms

b. scores of moderate symptoms suggest surgical treatment if the patient`s quality of life was poor
c. has been validated and translated to many languages
d. all of the above

9) What is false regarding BPH symptomatology?

a. the size of the prostate correlates well to the degree of obstruction
b. a decrease of 3 points in IPSS is associated with a subjective perception of improvement
c. median lobe enlargement gives rise to serious obstructive symptoms
d. bladder trabeculation is not specific for an obstructing prostate

10) In BPH patients, total PSA level correlates to:

a. the glandular component of the prostate
b. the IPSS questionnaire points
c. the PVR
d. the transitional zone volume

11) What is the likelihood that PSA level in men with acute urinary retention due to urethral stricture will decrease after catheterization?

a. never
b. unlikely
c. likely
d. always

12) IPSS decreases after successful TURP because:

a. PSA decreases
b. the prostate size decreases
c. the complaints resolve
d. the Q.O.L improves

13) The probability of developing acute urinary retention is related to:

a. the neurological status of the patient
b. PVR
c. severity of obstructive LUTS
d. all of the above

14) Smooth muscle tension in the prostate is mediated by which receptors?

a. α1-a
b. α1-b
c. α2-a
d. α2-b

15) A 50% reduction of prostate size is expected after a 6-month therapy with:

a. alfuzosin
b. silodosin
c. finasteride
d. tamsulosin

16) Open prostatectomy is preferred in treating BPH with:

a. sizable bladder stones
b. Hutch diverticulum
c. a suspicion of cancer
d. a & b

17) A 55 yrs. male patient with familial BPH, IPSS 9, PSA 23ng/ml, prostate size 31 cc, PVR 54 cc, on watchful waiting management. Next step should be:

a. tamsulosin 0.8 mg
b. reassurance
c. repeat total and free PSA
d. diagnostic cystoscopy

18) An ED patient on low-dose tadalafil develops BPH. What medication should he avoid?

a. tamsulosin
b. alfuzosin
c. doxazosin
d. silodosin

19) A BPH patient presents with retention of urine. He is Catheterized. Later, he underwent TURP. When would the highest PSA value be?

a. before catheterization
b. after catheterization and before TURP
c. immediately after TURP
d. 2 weeks after TURP

20) In an 80 yrs. diabetic man on insulin for 35 yrs.; what would be the proper sequence of developing the following obstructing BPH/LUTS?

a. frequency, over-flow incontinence, straining, retention
b. straining, frequency, over-flow incontinence, retention
c. straining, frequency, retention, over-flow incontinence
d. frequency, straining, retention, over-flow incontinence

21) What prostatic lobe(s) can be assessed during DRE?

a. anterior
b. median
c. left lateral
d. all of the above

22) Complications related to obstructive BPH/LUTS include all of the following, EXCEPT:

a. bladder stones
b. prostate cancer
c. renal insufficiency
d. bladder diverticula

23) BPH patients with severe irritative symptoms or microscopic hematuria should:

a. for urine cytology testing

b. for PSA testing
c. for TRUS
d. use anticholinergic medication

24) Anticholinergic medications work best with BPH patients who have:

a. small prostate
b. mainly median lobe hypertrophy
c. history of urinary retention
d. mainly irritative symptoms

25) The most serious drawback of anticholinergic drugs on BPH patients is:

a. renal insufficiency
b. urinary retention
c. dry mouth
d. painless hematuria

26) In BPH patients, follow up PSA is of value because:

a. helps predict the response to 5α-reductase inhibitors
b. monitors LUTS/BPH progression
c. BPH patients are at higher risk of developing prostate cancer
d. a & b

27) In BPH patients, which of the following measures reduces PSA value by one-half?

a. 2 weeks after performing prostatic urethral lift
b. 6-month treatment with 5α-reductase inhibitors
c. after placing a stent in the prostatic urethra
d. immediately after removing one-half of the prostate by TURP

28) Prostatic nodules palpated on DRE might indicate:

a. tuberculous prostatitis
b. prostatic cancer
c. inspissated prostatic abscess
d. any of the above

29) PSA value has a strong correlation with:

a. IPSS
b. post void residual
c. prostate volume
d. Q-max at uroflowmetry

30) What can NOT be assessed during DRE?

a. sacral cord integrity
b. pelvic hematoma
c. pelvic floor muscle tenderness
d. prostatic median lobe hypertrophy

31) BPH/LUTS patients when present with mild creatinine elevation, are advised to do:

a. total and free PSA

b. renal ultrasonography
c. creatinine clearance
d. uroflowmetry

32) In men with obstructive BPH, what will NOT resolve after TURP?

a. bladder trabeculation
b. significant PVR
c. low peak flow rate
d. high IPSS

33) What is (are) the favorite criterion (criteria) to prescribe 5α-reductase inhibitors for BPH cases?

a. PSA > 1.5 ng/dL
b. prostate volume > 40 ml
c. IPSS > 19
d. a & b

34) What is (are) the indication(s) to prescribe α-adrenergic inhibitors for BPH patients?

a. peak flow rate of ≤ 12 mL/sec
b. prostate volume > 40 ml
c. PSA > 1.5 ng/dL
d. b & c

35) What is (are) the indication(s) of upper urinary tract imaging in men with LUTS?

a. hematuria
b. recurrent urinary tract infection
c. renal insufficiency
d. all of the above

36) In men with LUTS, which of the following is NOT a compelling indication for upper urinary tract imaging?

a. urolithiasis
b. receiving chemotherapy
c. upper tract surgery
d. painless hematuria

37) What drug prevents recurrent gross hematuria secondary to BPH?

a. enoxaparin
b. silodosin
c. finasteride
d. tolterodine

38) Which statement is false regarding TURP syndrome?

a. occurs because of absorption of non-sodium-containing irrigating fluid
b. occurs only on using unipolar TURP
c. results in brain edema due to dilutional hyponatremia
d. positioning the patient in anti-Trendelenburg helps prevent the syndrome

39) What is false concerning TURP syndrome?

a. symptoms begin with a serum sodium of less than 120 mEq/L
b. the mortality is 2.7-5.8 %
c. manifestations rely on acute changes in the intravascular volume and plasma solute concentrations
d. the preferred height of irrigating fluid is 60 cm above the patient

40) What is false concerning needle ablation therapy of the prostate (TUNA)?

a. prostate sizes of up to 70 ml can be treated
b. not recommended in patients with metallic artificial hip
c. retreatment rates are lower than for TURP
d. can be performed in an office-based setting

41) Transurethral incision of the prostate (TUIP):

a. only indicated in small prostates
b. complications are related to the amount of lost blood and removed chips
c. a minimal procedure where no risk of rectal injury or retrograde ejaculation have been reported
d. entails making 1 or 2 incisions along all prostate lobes except the apical

42) Which statement is false concerning transurethral microwave therapy (TUMT) for BPH treatment:

a. induces nerve degeneration in the prostate and tissue necrosis
b. frequently results in transient urinary retention
c. frequently leads to erectile dysfunction
d. the high-energy platform is superior to the low-energy with regard to clinical efficacy

43) Which statement is false regarding laser enucleation of the Prostate (HoLEP)?

a. provides tissue preservation for pathological examination
b. treats any size of prostatic adenoma
c. follows anatomic planes to remove the prostate in lobes
d. urinary incontinence is a significant drawback after HoLEP

44) On treating BPH, which procedure provides the best tissue preservation for pathological examination?

a. TURP
b. TUIP
c. HoLEP
d. HoLRP

45) On treating BPH, which procedure carries the risk of morcellator injury to the bladder?

a. PVP
b. HoLEP
c. HoLRP
d. TUMT

46) To achieve better hemostasis in prostate laser surgery, what is the ideal wavelength that

is easily absorbed by hemoglobin?

a. 532 nm
b. 694 nm
c. 755 nm
d. 1064 nm

47) What is false regarding prostate embolization for BPH?

a. the aim is to occlude the internal iliac vessels
b. there is a considerable radiation risk during the procedure
c. bilateral embolization provides better results
d. eye protection is not required

48) What is (are) the possible complication(s) of prostate stents?

a. hematuria and infections
b. migration and encrustation of the stent
c. irritative urinary symptoms and painful ejaculation
d. all of the above

49) Preferably, what is the last part of the prostate to be removed while performing TURP?

a. bladder neck
b. apex
c. median lobe
d. para-collecular

50) How to manage priapism that occurs during endoscopic surgery?

a. corporal aspiration
b. corpora injection with an α-adrenergic agent
c. corpora injection with an α-adrenergic blocker
d. treatment required

51) On measuring the prostate volume during endoscopy:

a. each centimeter over the normal 2-cm prostate urethral length equates to an additional 12 g in prostate weight
b. each centimeter over the normal 2.5-cm prostate urethral length equates to an additional 10 g in prostate weight
c. each centimeter over the normal 2.5-cm prostate urethral length equates to an additional 15 g in prostate weight
d. each centimeter over the normal 1.5-cm prostate urethral length equates to an additional 5 g in prostate weight

52) When comparing suprapubic to retropubic prostatectomy for removing prostatic adenoma, the former allows:

a. management of concomitant Hutch diverticulum
b. removing small bladder stones
c. better access to prostatic fossa
d. technically, easier trigonization

53) When comparing retropubic to suprapubic prostatectomy for removing prostatic adenoma, the former has the advantage of:

a. lesser chance of post-operative urethral stricture
b. milder postoperative hematuria
c. tension-free bladder closure
d. extra-peritoneal approach

54) When comparing TURP to open prostatectomy for removing prostatic adenoma, the latter has the following advantages, EXCEPT:

a. risk of dilutional hyponatremia
b. operating on patients with multiple bladder diverticula
c. operating on patients who cannot flex their hips and/or knees
d. unfavorable tissue preservation for pathological examination

55) What is (are) the contraindication(s) to open prostatectomy for prostatic adenoma?

a. small fibrous glands
b. the presence of prostate cancer
c. previous prostatectomy
d. all of the above

56) Robot-assisted laparoscopic prostatectomy for prostatic adenoma has the following advantage over TURP:

a. operation cost
b. smaller incisions with a shorter hospital stay
c. lower risk for blood transfusion
d. none of the above

57) What is the first-line management of uncomplicated LUTS due to large prostate?

a. α-adrenergic blocker
b. combination of α-adrenergic blocker and 5α-reductase inhibitor
c. watchful waiting
d. TURP

58) What is the commonest cause of LUTS in men beyond middle age?

a. urethral stricture
b. bladder stones
c. BPH
d. prostatitis syndrome

59) What is (are) the indication(s) of antimuscarinic agents and PDEIs as adjuncts therapy in BPH cases?

a. men with storage symptoms
b. men with ED
c. failed combination of α-adrenergic blocker and 5α-reductase inhibitor
d. a & b

60) Which statement(s) describe(s) the bladder's response to an obstructing prostate?

a. may develop detrusor instability with irritative LUTS
b. may develop poor compliance with frequency and urgency symptoms
c. may develop poor detrusor contractility with obstructive LUTS
d. all of the above

61) What is the initial response of the detrusor muscle to obstruction?

a. increased intravesical pressure
b. increased detrusor pressure
c. increase collagen deposition in the detrusor
d. detrusor smooth muscle hypertrophy

62) What is false concerning the pathogenesis of BPH?

a. intra-prostatic levels of estrogen decrease in men with BPH
b. stimulation of the adrenergic nervous system results in a dynamic increase in prostatic urethral resistance
c. inflammation may play a role through cytokines to promote cell growth
d. hyperplasia occurs due to an imbalance between cell death and cell proliferation

63) In BPH, the etiology of acute urinary retention includes:

a. prostatic infarction
b. prostate infection
c. bladder overdistention
d. all of the above

64) Which statement best describes the natural history of BPH:

a. worsening of LUTS and BPH over time
b. patients die of other reasons before serious complications occur
c. physically, the space of prostatic fossa limits the gland enlargement
d. ultimately, the gland will degenerate and undergo apoptosis

65) What is false concerning the diagnosis of BPH?

a. IPSS cannot be used to establish the diagnosis of BPH/LUTS
b. prostate biopsy is essential in diagnosing BPH and excluding cancers
c. PSA and uroflowmetry help diagnose the condition
d. none of the above

66) What statement is true regarding post-void residual of urine (PVR)?

a. nearly all men have PVR of less than 12 ml
b. predicts the outcome of surgical treatment
c. correlates well with BPH/LUTS
d. is diagnostic for bladder outlet obstruction

67) What is true regarding the use of α-blockers and the development of "Intraoperative Floppy Iris Syndrome" (IFIS)?

a. complicates approximately 0.7% of cataract surgery cases
b. manifests as poor preoperative pupil dilation, iris prolapse, and progressive intraoperative miosis

c. could persist long after the discontinuation of tamsulosin
d. intraoperative lidocaine reduces its incidence in patients taking α-adrenergic inhibitors

68) What is true regarding mirabegron, the β3 agonist, in treating BPH?

a. achieves better results when combined with antimuscarinic
b. enhances detrusor contractility resulting in higher Q-max
c. enhance detrusor relaxation during bladder-filling phase
d. increases voiding pressure that poses risk on renal function

69) Which drug reduces the incidence of prostate cancer by 23% with a small increase in high-grade tumor incidence?

a. cetrorelix
b. flutamide
c. dutasteride
d. zanoterone

70) Which of the following is NOT classified as a "complicated LUTS"?

a. LUTS with neurologic disease
b. LUTS with post-void dribble
c. LUTS with suspicious DRE
d. LUTS with hematuria

71) "TURP syndrome" is more likely to occur when:

a. the irrigating fluid is at a pressure exceeding 10 mm Hg
b. the prostate volume is > 45 cc
c. the resection time is > 90 minutes
d. all of the above

72) The most serious complication of TURP is:

a. damage to the internal sphincter
b. damage to the external sphincter
c. bladder perforation
d. damage to a ureteral orifice

73) TURP carries an incidence of retrograde ejaculation of:

a. 62 - 78%
b. 48 - 61%
c. 79 - 93%
d. 34 - 47%

74) The lowest re-treatment rate of BPH is for:

a. TUIP
b. TURP
c. HoLEP
d. HoLRP

75) When comparing HoLEP to open prostatectomy for a 70 g prostatic adenoma removal; what parameter goes in favor of the latter?

a. operation time
b. duration of in-hospital stay
c. amount of blood transfused
d. time to catheter removal

76) What is the capsular perforation rate in prostate vaporization surgery?

a. 0.2 – 1%
b. 1.2 – 2.1%
c. 2.3 – 3.4%
d. 3.7 – 5.6%

77) When comparing Thulium laser (Tm:YAG) to TURP for prostatic adenoma resection, which parameter is in favor of the former?

a. operation time and time to catheter removal
b. changes in symptom scoring and urodynamic findings
c. amount of blood transfused and duration of in-hospital stay
d. none of the above

ANSWERS TO SENILE ENLARGEMENT OF THE PROSTATE

1-a the number, not the size of prostate cells that increases in BPH. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

2-d the number of androgen receptors in the prostate remains the same with aging. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

3-c type-1 is active in hair follicles, while type-2 is in prostate cells. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

4-a obstruction results in bladder smooth muscle hypertrophy and collagen deposition. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

5-b familial BPH presents at a younger age. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

6-a calcium channel blockers and β-adrenergic blockers help bladder evacuation and lower IPSS points. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

7-a IPSS is not prostate-specific. It is general for all obstructive LUTS. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

8-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

9-a the size of the prostate doesn`t correlate with the degree of obstruction. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

10-a because the glandular (acinar) cells secrete PSA. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

11-d acute retention of urine elevates PSA levels and once relieved PSA drops. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

12-c IPSS evaluates complaints only. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

13-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

14-a prostate smooth muscle tension has been shown to be mediated by the α1-a adrenergic receptors. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

15-c the 5α-reductase inhibitor finasteride reduces prostate size after a 6-month course of treatment. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

16-d in cases when prostate cancer is likely, the option of open prostatectomy should be dismissed. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

17-c repeat PSA. In case prostate cancer is suspected go for TURP, prostate biopsy. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

18-c the manufacturers of tadalafil recommend avoiding using it with doxazosin to minimize the risk of symptomatic hypotension. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

19-c TURP is an extremely traumatic procedure to prostate cells and thus releases tremendous amounts of PSA to the circulation. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

20-d frequency is the first obstructive LUTS in BPH condition. Retention, in this case, is chronic painless that could be complicated, lately, by overflow incontinence. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

21-c anterior and median lobes are not accessible from the rectum. Campbell-Walsh Urology, 11th Edition, by

Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

22-b prostate cancer is not a complication of obstructive BPH/LUTS. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

23-a urine cytology to exclude CIS and any form of malignancy. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

24-d anticholinergics are to relieve symptoms related to bladder irritability. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

25-b renal insufficiency and hematuria are not reported drawbacks of anticholinergics. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

26-d BPH doesn`t increase the risk of developing prostate cancer. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

27-b PSA is reduced by one-half in patients on 5α-reductase inhibitors. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

28-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

29-c prostate volume is correlated to PSA. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

30-d median lobe projects into the bladder when enlarges. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

31-b to check whether or not renal insufficiency is due to obstruction. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

32-a bladder trabeculation will not resolve after relieving the obstruction. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

33-d IPSS has no direct correlation to prescribing 5α-reductase inhibitor.

34-a the poor flow rate is an indicative of obstruction. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

35-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

36-b a history of chemotherapy with no mention of renal function is not a recommendation of upper tract imaging in men with LUTS. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

37-c finasteride, the 5α-reductase inhibitor stops hematuria related to BPH. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

38-d patient position has no documented role in the pathogenesis of the syndrome. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

39-b the mortality is 0.2% to 0.8%. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

40-c retreatment rates for TUNA are higher than for TURP. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

41-a is indicated in small prostates < 30 ml. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

42-c infrequently, TUMT leads to erectile dysfunction. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

43-d urinary incontinence is unremarkable after HoLEP. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

44-c HoLEP provides enucleation of prostate lobes which is the ultimate way to deliver intact

prostate specimens for examination. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

45-b among the specified procedures, a morcellator is only needed in HoLEP. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

46-a self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

47-a occlusion should be carried out at a location distal than internal iliac vessels. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

48-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

49-b conventionally, the apex is the last portion to be resected. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

50-b intra-corpora injection with α-adrenergic agent resolves priapism. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

51-b self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

52-a Hutch diverticulum can`t be managed via retropubic approach. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

53-b the direct access to prostatic fossa allows better hemostasis resulting in milder postoperative hematuria. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

54-d open prostatectomy allows better tissue preservation for pathological examination as the whole lobes are delivered intact. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

55-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

56) robotic prostatectomy has lesser risks for perioperative hemorrhage and blood transfusion when compared to TURP. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

57-b the combination therapy is the preferred management. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

58-c self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

59-d antimuscarinic agents and PDEIs are useful adjuncts for men with storage symptoms or ED in addition to α-adrenergic blocker. Further updates are awaited. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

60-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

61-d the first change to occur is detrusor smooth muscle hypertrophy followed by significant intra- and extracellular changes in the smooth muscle that lead to bladder instability. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

62-a due to the androgen/estrogen imbalance, intra-prostatic levels of estrogen increase in men with BPH. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

63-d the etiology includes excessive fluid intake, alcohol consumption, sexual activity, in addition to what has been mentioned in the question. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

64-a in general, a worsening of LUTS and BPH happens over time, exposing the patient to significant complications. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

65-b prostate biopsy is not required for diagnosing BPH. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

66-a 78% of men have PVR values of less than 5 mL, and 100 % have volumes of less than 12 mL (Di Mare et al, 1963). Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

67-a complicates approximately 2% of cataract surgery cases. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

68-c mirabegron is an advanced "bladder sedative" that relaxes the detrusor without impairing its contractility. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

69-c as per the REDUCE study, dutasteride reduces the incidence of prostate cancer by 23% with a small increase in high-grade tumor incidence. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

70-b post-void dribble is a type of incontinence that doesn't complicate LUTS. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

71-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

72-b damage to the external sphincter is catastrophic. It will render the patient totally incontinent. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

73-a the incidences of retrograde ejaculation post TURP are 62-78%. (Briganti et al, 2006; Wilson et al, 2006). Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

74-c prostate enucleation provides the lower re-treatment rate. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

75-a operation time was found to be 14 min less in favor of open prostatectomy according to (Naspro et al, 2006). Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

76-a it ranges from 0.2% to 1% of cases (Rieken et al, 2010). Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

77-d as per Xia et al, 2008, results were comparable. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

KIDNEY CYSTS AND TUMORS

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **The etiology of renal cysts includes all of the following, EXCEPT:**
   a. autosomal dominant polycystic kidney disease (ADPKD)
   b. developmental cystic renal disease
   c. inherited cystic renal disease
   d. systemic disease with associated renal cysts

2) **Inherited renal cystic disease(s) include(s) the following:**
   a. glomerulocystic kidney disease (GCKD)
   b. Juvenile nephronophthisis (JNPHP)
   c. medullary cystic kidney disease
   d. all of the above

3) **What is (are) true regarding the etiology of medullary cystic kidney disease (MCKD)?**
   a. mutations in the $MCKD_1$ (chromosome 1q21) gene
   b. mutations in the $MCKD_2$ (chromosome 16q12) gene
   c. inherited in an autosomal dominant fashion
   d. all of the above

4) **What is the proper terminology of a renal cyst with the following characteristics: well-marginated, anechoic, with thin visible back wall, positive posterior acoustic enhancement, no septations, and no calcifications?**
   a. hyperattenuating renal cyst
   b. solitary renal cyst
   c. uncomplicated renal cyst
   d. focal renal cyst

5) **What is the likelihood that Bosniak type III renal cysts accompany malignant masses?**
   a. never
   b. unlikely
   c. likely
   d. always

6) **What type of Bosniak renal cysts accompanies tumor masses in 5% of cases?**
   a. I
   b. II
   c. III
   d. IV

7) **Regarding simple renal cysts, fluid attenuation on non-contrast CT series is:**
   a. < - 10 HU
   b. < - 20 HU
   c. < 10 HU
   d. < 20 HU

8) **What is the most common cause of genetic ESRD in children?**

a. autosomal recessive polycystic kidney disease
b. autosomal dominant polycystic kidney disease
c. multicystic dysplastic kidney disease
d. juvenile nephronophthisis

9) What is false concerning end-stage renal disease (ESRD)?

a. ARPKD accounts for 5% of ESRD in children
b. more than one-half of patients with ARPKD require kidney transplant before age 20 years
c. ADPKD is a common cause of ESRD
d. uncommonly, juvenile nephronophthisis causes ESRD in children

10) What is false concerning renal malignancy?

a. RCC occurs in < 5% of patients with tuberous sclerosis
b. glomerulocystic kidney disease, renal tumors are typically solitary, large, with central necrosis
c. Von Hippel-Lindau syndrome, renal tumors are frequently bilateral and multicentric
d. acquired cystic disease, tumors are commonly bilateral, and metastatic in 15% of cases

11) What is true regarding cancer incidence in renal cystic diseases?

a. > 90% in Bosniak type IV renal cysts
b. patients receiving renal transplants for polycystic kidney disease is 48% higher than that expected in the general population
c. all of the above
d. simple renal cysts might turn malignant in < 4% of cases

12) What is false concerning ADPKD patients?

a. hepatic cysts are the most common extra-renal manifestation
b. might experience cyst hemorrhage, renal infection, or nephrolithiasis
c. typically, complain of flank pain or intermittent hematuria in the early twenties
d. hypertension and CRF commonly occur in the fifth decade of life

13) What is true regarding ADPKD patients?

a. progress to ESRD in the sixth decade of life
b. hypertension is seen in 80% of patients with ADPKD aged 20-34 years
c. aortic valve stenosis in 25%
d. manifestations are more significant in patients with the PKD_2 genotype

14) Antenatal sonography is the diagnostic tool for the following condition:

a. glomerulocystic kidney disease
b. developmental cystic renal disease
c. Juvenile nephronophthisis
d. medullary cystic kidney disease

15) The likelihood of malignancy in category IIF (indeterminate) renal cysts is:

a. 20%
b. 30%
c. 40%

d. 50%

16) What is the treatment of a 3-cm renal mass suggestive of RCC adjacent to a huge renal cyst?

a. cyst aspiration and sclerosis
b. partial nephrectomy
c. endoscopic marsupialization and fulguration of the cyst
d. administration of TKIs

17) Which of the following conditions carries the best prognosis?

a. acquired cystic renal disease
b. juvenile nephronophthisis
c. medullary sponge kidney
d. bilateral multicystic dysplastic kidney

18) Which of the following conditions carries the worst prognosis?

a. acquired cystic renal disease
b. juvenile nephronophthisis
c. medullary sponge kidney
d. bilateral multicystic dysplastic kidney

19) What can NOT be a manifestation of a renal tumor?

a. right hydrocele
b. left varicocele
c. painless hematuria
d. hypertension

20) Which of the following is NOT a risk factor for RCC?

a. type II DM, especially in males
b. hypertension
c. obesity, especially in females
d. cigarette smoking

21) After radical nephrectomy, what is the 5-year survival rate for stage I RCC?

a. 80%
b. 85%
c. 90%
d. 95%

22) Which of the following factors is associated with increased survival in patients with metastatic kidney tumors?

a. physically active patients with good performance status
b. extirpation of the primary tumor
c. long disease-free interval between initial nephrectomy and the emergence of secondaries
d. all of the above

23) In renal mass(es), the main indication to take a renal biopsy is the suspicion of:

a. papillary RCC

b. renal metastases
c. renal oncocytoma
d. renal xanthogranuloma

24) On ultrasonography, what are the percentages of incidentally discovered renal masses that will later be malignant on further workup?

a. 70 - 85%
b. 55 - 70%
c. 40 - 55%
d. 25 - 40%

25) What type of renal adenomas is a precursor to papillary RCC?

a. adenoma with clear cell
b. papillary adenoma
c. metanephric adenoma
d. none of the above

26) What is false concerning renal angiomyolipoma (AML)?

a. most lesions ≤ 4 cm are asymptomatic
b. renal masses with fat content is pathognomonic for AML
c. renal biopsy from AML carries a high risk of hemorrhage
d. may coexist with malignant lesions, such as sarcomas and RCCs

27) What is true regarding renal angiomyolipoma (AML)?

a. most classic AMLs eventually undergo malignant transformation to sarcomatoid and epithelioid AML
b. the preferred treatment is nephroureterectomy followed by active surveillance
c. angiographic embolization and/or nephron-sparing surgery is advised for symptomatic AMLs greater than 4 cm
d. extra-renal sites include the pancreas, salivary glands, and thyroids

28) What is false concerning renal oncocytoma?

a. the central scar on CT or MRI, and the spoke-wheel pattern of vessels on angiograms are not specific to oncocytoma
b. calcification, necrosis, and hemorrhage are rare in oncocytomas
c. is thought to arise from the basement membrane of proximal convoluted tubules
d. treatment is partial nephrectomy or tumor excision

29) The diagnosis of renal adenoma is commonly made:

a. autopsy
b. staining positive for human melanoma black (HMB)-45
c. fine-needle aspiration cytology
d. exclusion

30) What is false regarding multiloculated cystic nephromas?

a. they follow a benign clinical course
b. they have a bimodal age distribution

c. they are more common in men than in women
d. none of the above

31) What is false concerning metanephric adenoma?

a. radiographically, it is indistinguishable from RCC
b. has a female predominance
c. has a benign clinical course
d. has a peak incidence in the third decade of life

32) On histological examination of a resected renal tumor, the presence of multiple mitochondria observed on electron microscopy is diagnostic for:

a. renal oncocytoma
b. multiloculated cystic nephromas
c. metanephric adenoma
d. adenoma with clear cell

33) On histological examination of a resected renal tumor, positive staining for human melanoma black (HMB)-45 is a distinctive and diagnostic feature for:

a. multiloculated cystic nephromas
b. angiomyolipoma
c. metanephric adenoma
d. adenoma with clear cell

34) What is (are) the risk factor(s) for developing simple renal cysts?

a. male gender
b. hypertension
c. renal insufficiency
d. all of the above

35) What is the likelihood that simple renal cysts increase in size and number over time?

a. never
b. unlikely
c. likely
d. always

36) CT shows a renal mass with calcifications associated with fat. What could the lesion be?

a. RCC
b. AML
c. teratoma
d. any of the above

37) After radical nephrectomy for organ-confined RCC, what is (are) the recommended surveillance radiologic examination(s)?

a. chest X-ray and abdominal ultrasonography every 3 months for the first year, and then annually for 3 years
b. annual chest X-ray for 3 years
c. abdominal and chest CT every 6 months for the first year, and then annually for 3 years

d. radiological examination required

38) What is the most powerful single predictor of oncologic outcomes in RCC cases?

a. margin status and grade
b. tumor size
c. tumor stage
d. the time interval between the tumor emergence and excision

39) Which of the following renal tumors carries the best prognosis?

a. fibrosarcoma
b. leiomyosarcoma
c. carcinoid
d. adult Wilm`s tumor

40) Which RCC subtype is most likely to benefit from targeted molecular therapy?

a. clear cell
b. chromophobe
c. papillary
d. renal medullary

41) What does determine the renal function status after partial nephrectomy of a single kidney?

a. the quality of the kidney and renal function prior to surgery
b. the quantity of vascularized parenchymal mass preserved after excision of the tumor
c. warm ischemia time
d. all of the above

42) What is the most common histologic subtype of renal sarcomas?

a. rhabdomyosarcoma
b. nephrosarcoma
c. leiomyosarcoma
d. neurosarcoma

43) What is false concerning "targeted molecular therapy"?

a. a personalized medical therapy devised to meet each person's individual needs for cancer`s specifications
b. treats cancer by interrupting unique molecular abnormalities that drive cancer growth
c. some cancer types have different molecular targets
d. none of the above

44) What is NOT an indication for simple nephrectomy?

a. symptomatic chronic renal infection with poor function
b. some cases of renovascular hypertension
c. symptomatic calculus disease with poor renal function
d. prior to kidney transplant

45) What is an indication for radical nephrectomy?

a. a 6-cm, polar tumor

b. bilateral RCC
c. locally advanced RCC
d. unilateral RCC with a functioning opposite kidney, but at risk for future impairment

46) What is the relapse rate for completely resected RCC after radical nephrectomy?

a. 1- 10%
b. 10 - 20%
c. 20 - 30%
d. 30 - 40%

47) What is false concerning imaging studies for preoperative evaluation of RCC case?

a. case of bone pain or elevated serum calcium and/or alkaline phosphatase levels, an isotopic bone scan is required
b. renal arteriography accurately localizes central scaring and tumor necrosis
c. trans-esophageal echocardiography helps assess vena caval and right atrial tumor thrombi
d. CT can detect renal vein involvement in 82-95% of cases and vena caval involvement in 95-100% of cases

48) In RCC, ipsilateral adrenal metastasis occurs in:

a. 0.3 - 2%
b. 2 - 10%
c. 11 - 18%
d. 19 - 26%

49) What is false regarding radical nephrectomy operation?

a. nodal involvement doesn`t influence prognosis
b. renal artery should be ligated before the vein to avoid kidney ballooning
c. cardiopulmonary bypass with deep hypothermic circulatory arrest is performed in patients with supra-diaphragmatic tumor thrombi
d. renal vein thrombi can be resected after incising the vein between 2 vascular clamps

50) Manifestations of paraneoplastic syndrome associated with RCC include all of the following, EXCEPT:

a. anemia and erythrocytosis
b. hepatic dysfunction and elevated human chorionic gonadotropin levels
c. hypocalcemia
d. hypertension

51) Metastatic tumors to the kidney are common from all of the following organs, EXCEPT:

a. lungs
b. thyroid
c. breasts
d. melanoma

52) The second most common RCC subtype is:

a. collecting duct

b. clear cell
c. papillary
d. chromophobe

53) What is false concerning renal cancers?

a. papillary subtype of RCC has a tendency to multifocality
b. chromosome 13 alterations are common in the development of clear cell renal carcinoma
c. a solid mass on CT that enhances more than 15 HU is suggestive of RCC
d. bilateral involvement in RCC either synchronously or metachronously occurs in 2% to 4% of patients

54) According to Fuhrman's classification system for nuclear grading in RCC, nuclear size of 20 μg with irregular outline and prominent nucleoli is grade:

a. 1
b. 2
c. 3
d. 4

55) Fuhrman's grading system for renal cell carcinoma relies on:

a. nuclear size, outline, and nucleoli
b. cohesiveness and the degree of cellular atypia
c. chromatin structure and content of the interphase nucleus
d. multinucleation and mitosis

56) In RCC cases where IVC involvement with tumor thrombi are suspected, venacavography:

a. the first and most reliable radiologic examination to study IVC thrombi
b. reserved for patients with equivocal MRI or CT findings
c. obsolete and has fallen out of use
d. carries a risk of IVC terrible bleeding that outweighs the diagnostic merits

57) Routine metastatic evaluation in RCC cases should include all of the following, EXCEPT:

a. abdominal CT
b. chest X-ray
c. renal function test
d. liver function test

58) In a localized RCC, local recurrence after tumor ablation therapy is managed by any of the following options, EXCEPT:

a. repeat ablation
b. active surveillance
c. salvage surgery
d. radical nephrectomy

ANSWERS TO KIDNEY CYSTS AND TUMORS

1-a ADPKD belongs to the category of inherited diseases. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

2-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

3-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

4-c the description meets uncomplicated (Bosniak type I) renal cyst. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

5-c the likelihood of type III Bosniak to accompany malignant tumors is 55%. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

6-b in Bosniak types I throughout type IV, the percentages of accompanying malignancies are 0%, 5%, 55%, 100% respectively. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

7-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

8-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

9-d juvenile nephronophthisis is the most common cause of genetic ESRD in children. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

10-b GCKD is a rare disease that doesn't cause solitary, large renal tumors, with central necrosis. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

11-c self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

12-c typically, complain of flank pain or intermittent hematuria in the fourth decade of life. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

13-a self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

14-b as early as 15 weeks of intra uterine life, ultrasonography demonstrates multiple variably sized, non-communicating renal cysts outlined by hyperechoic intervening renal parenchyma. Typically, ureters and renal pelvises are not visualized. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

15-a type IIF shows a minimal enhancement and/or thickening of a hairline-thin smooth septum or wall; mildly thickened or nodular calcification; no enhancing soft-tissue components; includes non-enhancing high-attenuation lesions that are 3 cm or larger. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

16-b solitary renal tumors smaller than 4 cm are worth partial nephrectomy. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

17-c medullary sponge kidney is typically non-progressive and carries an excellent prognosis. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

18-d bilateral MCDK is incompatible with life. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

19-a hydrocele has no proven clinical connection to renal tumors. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

20-a DM has no proven link to RCC development. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

21-d tumors confined to the kidney are associated with excellent prognosis. Campbell-Walsh Urology, 11th

Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

22-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

23-b renal mets, infected renal cyst, lymphoma, abscess are the indications to perform renal biopsies. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

24-a self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

25-b papillary adenoma is a premalignant neoplasm that progresses to papillary RCC. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

26-b renal tumors with fat contents are lipoma, liposarcoma, teratoma, Wilms tumor or oncocytoma. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

27-c despite that the best management of AML is a matter of controversy, angiographic embolization and/or nephron-sparing surgery is advised for symptomatic AMLs greater than 4 cm. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

28-c is thought to arise from the intercalated cells of collecting ducts. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

29-a many renal adenomas were discovered at autopsy with an incidence of 7% to 23%. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

30-c self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

31-d the peak incidence is in the fifth decade of life. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

32-a self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

33-b angiomyolipoma will stain positive for HMB-45 in most cases. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

34-d risk factors for developing simple renal cysts include age, male gender, hypertension, and renal insufficiency. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

35-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

36-a tumors with calcification associated with fat are uncommon, but are almost always malignant RCC. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

37-b for low risk (pT_1-N_0-M_0) cases, annual CXR for 3 years is recommended. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

38-c the single most important prognostic factor for RCC cases is tumor stage. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

39-c self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

40-a targeted molecular therapies like TKIs, chiefly target VEGF. Therefore, the pathways that are typically upregulated are in clear cell variety of RCC. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

41-d all of the specified reasons in addition to the type of reconstruction. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

42-c leiomyosarcoma accounts for 50% to 60% of the histologic subtype of renal sarcomas. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

43-d all of the indicated statements are true. None is false. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

44-d donated kidneys are transplanted to the lower abdominal region. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

45-c a, b, d cases should undergo nephron-sparing surgery or partial nephrectomy. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

46-c self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

47-b renal arteriography, although no longer routinely necessary before radical nephrectomy, is useful in showing arterialization of tumor thrombi. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

48-b self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

49-a extensive nodal involvement is a harbinger of poor prognosis. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

50-c hypercalcemia in (3-6%). Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

51-b common organs send tumor secondaries are: lungs, breasts, gastrointestinal tract, melanoma, or hematologic. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

52-c clear cell: 70% to 80%; papillary: 10% to 15%; chromophobe: 3% to 5%; collecting duct: less than 1%; and medullary: rare. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

53-b chromosome 3 alterations are common in the development of clear cell renal carcinoma. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

54-c self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

55-a Fuhrman's classification system relies on nuclear grading. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

56-b self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

57-c renal function doesn't help detect secondaries. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

58-d ablation therapy is indicated in patients who are unfit for formal radical extirpation. Therefore, radical nephrectomy has fallen out of choice a quite earlier in the management timeline. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

UROTHELIAL TUMORS OF THE UPPER & LOWER URINARY TRACTS

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **Regarding ureteral cancers, what is the commonest part of tumor development?**
   a. upper ureter
   b. middle ureter
   c. lower ureter
   d. comparable

2) **Which of the following is a risk factor for developing upper urinary tract tumors?**
   a. obesity
   b. consuming artificial sweeteners
   c. asbestosis
   d. analgesic abuse

3) **What is the commonest manifestation of upper tract urothelial carcinomas?**
   a. obstructive uropathy
   b. painless hematuria
   c. pain radiating to the groin
   d. locally advanced tumor

4) **Evaluation of painless hematuria includes all of the following, EXCEPT:**
   a. urine cytology
   b. CT urography
   c. cystoscopy
   d. renal function tests

5) **Concerning upper tract urothelial tumors, what is the single most important predictor of outcome?**
   a. tumor stage
   b. tumor grade
   c. lymphovascular invasion
   d. lymph node spread

6) **In what percentages of patients do bilateral upper tract tumors occur either synchronously or metachronously?**
   a. 0.6 - 2%
   b. 2 - 6%
   c. 6 - 10%
   d. 12 - 16%

7) **What is the likelihood that inverted papillomas of the upper urinary tract accompany tumors?**
   a. never
   b. unlikely
   c. likely
   d. always

8) In what percentages do upper tract urothelial tumors develop in patients with a bladder urothelial cancer?

a. 2 - 4%
b. 4 - 6%
c. 6 - 8%
d. 8 - 10%

9) What is false concerning upper tract urothelial tumors?

a. rarely diagnosed at autopsy
b. the peak incidence occurs between ages 70 and 80
c. they occur twice as frequently in men as in women
d. none of the above

10) What is false regarding squamous metaplasia of the urinary bladder (non-keratinized) subtype?

a. only in females
b. associated with chronic irritation, polypoid cystitis, and cystitis glandularis
c. risk for squamous cell carcinoma
d. treated with estrogen, if symptomatic

11) Regarding bladder neoplasia, squamous metaplasia differs from squamous dysplasia as the latter is/has:

a. well-differentiated tumor with broad-based invasive font
b. marked atypia distributed on wide areas of superficial urothelium
c. atypia is present
d. atypia but marked degenerative epithelial changes

12) During women`s life span, what percentage of women will develop keratinizing squamous metaplasia of the bladder?

a. 10%
b. 20%
c. 30%
d. 40%

13) What percentage of bladder cancers is squamous cell type in origin?

a. 2%
b. 5%
c. 70%
d. 90%

14) What is true regarding inverted papilloma of the bladder?

a. the standard treatment is transurethral resection
b. the prognosis for inverted papilloma is pathetic, with a recurrence rate of approximately 65%
c. the likelihood of synchronous urothelial carcinoma is 26%
d. has been shown to harbor p53 gene mutations

15) What gene mutation is common in carcinoma-in-situ of urinary bladder?

a. RB
b. cyclin A
c. HRAS
d. CD-44

16) Intravesical installation of BCG should NOT be given soon after bladder tumor resection (TURBT) because:

a. there will be no target tumor tissue to work on
b. post-op. hematuria interacts unfavorably with BCG composition
c. the risk of systemic absorption and sepsis
d. the high risk of BCG reflux to kidneys while bladder irrigation

17) On diagnosing bladder cancers, what advantage does urine cytology has over tumor markers?

a. high specificity
b. high sensitivity
c. high reliability
d. strong validity

18) What might occur while resecting a bladder mass at the postero-lateral wall?

a. bladder perforation
b. obturator nerve reflex
c. vesico-ureteral reflux
d. terrible bleeding

19) What is (are) the classic presentation(s) of bladder cancers?

a. irritative bladder symptoms
b. obstructive bladder symptoms
c. palpable suprapubic mass on physical examination
d. painless profuse hematuria

20) The treatment of muscle-invasive bladder cancer in men includes all of the following, EXCEPT:

a. radical cysto-prostatectomy
b. anterior pelvic exenteration
c. bilateral pelvic lymphadenectomy
d. creation of a urinary diversion

21) The treatment of non–muscle-invasive bladder cancer begins with:

a. single intravesical chemotherapy
b. TURBT
c. intravesical BCG vaccine
d. multiple bladder biopsies

22) What is false concerning carcinoma-in-situ (CIS) of urinary tract?

a. frequently found in association with high-grade or extensive TCC

b. has a rate of progression to muscle invasion of 10-25%
c. significant areas of CIS are easily missed by routine cystoscopy
d. treatment begins with TURBT

23) What type of bladder cancers might be caused by Schistosoma haematobium infection?

a. transitional cell carcinoma
b. squamous cell carcinoma
c. adenocarcinoma
d. small cell carcinoma

24) Which of the following cystoscopic descriptions of bladder tumors is false?

a. nodular or sessile lesions usually invade muscle
b. papillary bladder tumors are typical of low stage and grade
c. carcinoma in situ appears as a flat, velvety patch
d. sarcomas commonly invade bladder base and ureteral orifices causing obstructions

25) What is the most common sarcoma of the bladder?

a. leiomyosarcoma
b. rhabdosarcoma
c. carcinosarcoma
d. neurosarcoma

26) Which of the following does NOT predispose to bladder cancer?

a. working with organic chemicals and dyes
b. abuse of pain-control medications especially phenacetin
c. exposure to arsenic and aromatic amines
d. schistosomiasis

27) The 5-yr survival rates of non-muscle-invasive bladder cancer are:

a. 40 - 55%
b. 55 - 70%
c. 70 - 85%
d. 85 - 100%

28) Risk factors for recurrence and progression of bladder cancers include the following:

a. multifocality
b. high tumor grade and advanced stage
c. presence of CIS
d. all of the above

29) Once muscle invasion is detected in bladder cancers, what percentage of occult metastasis is expected?

a. 30%
b. 40%
c. 50%
d. 60%

30) Bladder tumors with hydronephrosis are:

a. often of high-grade sarcomas
b. often associated with muscularis propria invasion
c. due to vesical polyps occluding ureteric orifices
d. should be resected but not diathermized

31) What is the most effective adjuvant intravesical therapy for bladder tumors?

a. cisplatin
b. BCG
c. mitomycin C
d. 5-fluorouracil

32) Bladder cancer patients who once failed BCG vaccine, should:

a. undergo cystectomy
b. try mitomycin c
c. take a second course of BCG
d. take a second course of BCG + quinolones

33) What is NOT a contraindication to BCG treatment?

a. history of pulmonary TB
b. total incontinence
c. immunosuppression
d. impaired renal function

34) What is the ideal vesical tumor patient for bladder preservation?

a. patients with carcinoma in situ
b. patients with completely resected solitary tumor
c. patients with preserved kidney and liver functions after 2 courses of BCG
d. patients with leiomyosarcoma

35) Carcinoma-in-situ of the prostatic urethra mostly occurs at the:

a. mid prostate to the verumontanum at the 5 and 7 o'clock positions
b. lateral margins of the prostate at the 10 and 2 o'clock positions
c. entire area distal to the urethral crest
d. area between ejaculatory duct openings and prostatic utricle

36) Partial cystectomy for bladder tumors can be performed when the following criterion(a) is(are) met:

a. the lesion is solitary and no associated CIS
b. physically, a surgical margin of 2-cm can be obtained
c. the resected area should be far enough from ureteral orifices and the bladder neck
d. all of the following

37) Immediately following transurethral resection of bladder tumors, intravesical installation of which material(s) is(are) contraindicated?

a. epirubicin
b. mitomycin c
c. BCG

d. none of the above

38) For radical cystectomy, thromboembolism prophylaxis is required:

a. immediately before operation
b. immediately before incision and post-operative for 1 day
c. immediately before incision and post-operative for 15 days
d. immediately before incision and post-operative for 30 days

39) While deeply resecting a large bladder tumor, the surgeon noted loss of bladder distension, what should next step be?

a. increase the irrigation fluid and pursue the procedure
b. abort the procedure and leave a urethral catheter
c. perform cystogram and manage accordingly
d. perform abdominal exploration and manage accordingly

40) While resecting a large bladder tumor located at the right lateral wall, the surgeon observes a bladder perforation, what should next step be?

a. continue the procedure as perforations at this site do no harm
b. abort the procedure and leave a urethral catheter
c. convert tumor removal to open method and repair the defect
d. perform abdominal exploration and manage accordingly

41) What is the commonest type of primary urethral tumors?

a. adenocarcinoma
b. transitional cell carcinoma
c. squamous cell carcinoma
d. basal cell carcinoma

42) What is false regarding the symptomatology of urethral cancers?

a. obstructive LUTS are common presentations and occur in association with carcinoma in situ
b. might present as perineal abscesses and fistulae
c. could be asymptomatic
d. venereal diseases increase the risk of urethral cancers

43) What is the imaging modality of choice in the evaluation of a suspected urethral cancer?

a. ascending urethrography
b. voiding cystourethrography
c. MRI
d. IVU

44) The treatment of $T_2/N_x/M_0$ prostatic urethral cancer is:

a. bloc resection involving total penectomy, cystoprostatectomy, resection of the pubic rami and urogenital diaphragm, with pelvic lymphadenectomy. In addition, creating a urinary diversion.
b. total penectomy involving removal of the penis, urethra, and penile root
c. partial penectomy involving excision of the malignant lesion with 2-cm margins

d. transurethral resection or fulguration

45) Partial penectomy for urethral cancer is indicated in:

a. infiltrative proximal penile urethral carcinomas
b. infiltrative distal penile urethral carcinomas
c. recurrent proximal penile urethral carcinoma after laser resection
d. $T_3/N_2/M_0$ at bulbar urethra

46) What is the commonest type of tumor occurring in urethral diverticuli?

a. adenocarcinoma
b. transitional cell carcinoma
c. squamous cell carcinoma
d. basal cell carcinoma

47) Common benign urethral tumors include all of the following, EXCEPT:

a. leiomyoma
b. hemangioma
c. fibroepithelial polyp
d. lymphangioma

48) What is the commonest type of tumors occurring in the penile urethra?

a. adenocarcinoma
b. transitional cell carcinoma
c. squamous cell carcinoma
d. basal cell carcinoma

49) What is the commonest type of tumors occurring in the female urethra?

a. adenocarcinoma
b. transitional cell carcinoma
c. squamous cell carcinoma
d. comparable

50) Which of the following statements concerning lymphatic drainage of the male urethra is true?

a. the anterior urethra drains into the inguinal and pelvic nodes
b. the posterior urethra drains into the pelvic nodes
c. the proximal two-thirds drain into the external and internal iliac nodes
d. the distal one-third drains into the obturator nodes

51) In women, what is the commonest type of cancers occurring in the proximal urethra?

a. adenocarcinoma
b. transitional cell carcinoma
c. squamous cell carcinoma
d. basal cell carcinoma

52) The most significant prognostic factors for survival in female urethral cancers are:

a. sensitivity to chemotherapy and age at presentation
b. anatomic location and extent of the tumor

c. histologic type of the tumor and sensitivity to radiotherapy
d. tumor’s stage and grade

ANSWERS TO UROTHELIAL TUMORS

1-c approximately 70% of ureteral tumors occur in the lower ureter, 25% in the midureter, and 5% in the upper ureter. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

2-d analgesic abuse especially phenacetin. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

3-b hematuria either gross or microscopic occurs in 56% to 98% of patients. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

4-d RFT is not on the hematuria workup list, despite it is important. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

5-a self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

6-b self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

7-b self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

8-a Upper tract tumors develop in 2% to 4% of patients with bladder cancer. Whereas, patients with upper tract tumors develop bladder cancers in 30% of cases. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

9-d all the indicated statements are true, and none is false. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

10-b non-keratinized subtype is not associated with chronic irritation, polypoid cystitis, and cystitis glandularis. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

11-c a. describes verrucous carcinoma, while b. describes carcinoma in situ. D. describes radiation atypia. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

12-d approximately 40% of women and 5% of men have keratinized squamous metaplasia of the bladder. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

13-b 90% of bladder cancers are of urothelial origin, 5% squamous cell, and less than 2% adenocarcinoma or other variants. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

14-a self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

15-a the genetic abnormalities in CIS are RB, TP_{53}, and PTEN genes. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

16-c resected areas of bladder wall provide raw areas readily for BCG systemic absorption. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

17-a tumor markers such as BTA stat, NMP-22 are highly sensitive in detecting bladder tumors, while urine cytology is more specific. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

18-b postero-lateral wall resection, at approximately 4 o'clock or 8 o'clock can induce obturator nerve stimulation. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

19-d approximately 80-90% of patients present with painless gross hematuria. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

20-b anterior pelvic exenteration is for female patients. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

21-b TURBT. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

22-b the progression rate to muscle invasion is 50-75%. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

23-b SCC. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

24-d sarcomas typically appear as a raised bladder wall. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

25-a self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

26-b abuse of pain-control medications predisposes to RCC, not TCC.

27-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

28-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

29-c self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

30-b hydronephrosis in bladder cancers often associated with muscularis propria invasion, and not due to tumor mass blocking the orifice. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

31-c mitomycin C is the most effective adjuvant intravesical therapy and should be administered within 6 hours of tumor resection unless bladder perforation is noted. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

32-c for patients who have failed BCG, a second course results in 30% to 50% response rate. Quinolones should not be given with BCG. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

33-d TB infection might flare up on administering BCG. Patients with total can`t withhold BCG treatment inside the bladder. Immunosuppressed individuals can`t exhibit the required response to BCG treatment. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

34-b carefully, a bladder with solitary and completely resected tumor can be saved. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

35-a the mid prostate to the veru at the 5 and 7 o'clock positions where the highest concentration of prostatic ducts are located. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

36-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

37-c the risk of systemic absorption of BCG and sepsis are very significant immediately post operatively. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

38-d a reduction in postoperative thromboembolic events from 4.6 to 0.8% was observed in patients treated for 30 days following surgery. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

39-c cystogram diagnoses the likelihood of bladder perforation. Abdominal exploration is only for intraperitoneal perforations. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

40-b extraperitoneal bladder perforations are managed conservatively. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

41-b the majority (55-77.6%) are transitional cell carcinoma. Squamous cell carcinoma in (11.9-21.5%), adenocarcinoma (5-16.4%), others (5.5%). Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

42-a CIS presents as irritative LUTS. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

43-c self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

44-a T2 - tumors invade corpus spongiosum, prostate, or periurethral muscle and should be treated by en block resection. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

45-b it involves excision of the malignant lesion with 2-cm margins, indicated for infiltrative, distal penile urethral cancers. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

46-a self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

47-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

48-c in the penile part 90% are squamous cell cancers and 10% are transitional cell tumors. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

49-d in the female urethra, ⅓ is squamous cell carcinoma, ⅓ is adenocarcinoma, and ⅓ is transitional cell carcinoma. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

50-b self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

51-c for female proximal urethral cancers, squamous cell carcinoma accounts for 60%; transitional cell carcinoma for 20%; adenocarcinoma 10%; undifferentiated tumor and sarcomas for 8%; and melanoma for 2%. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

52-b self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

TUMORS OF THE TESTES

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **What is the most common presentation of testicular cancers?**
   a. unilateral hydrocele
   b. dull ache or heavy sensation in the lower abdomen
   c. painless swelling or a nodule in the testicle
   d. incidental finding on scrotal ultrasonography

2) **What is the percentage of germ cell tumors among all testicular cancers?**
   a. greater than 90%
   b. lesser than 40%
   c. greater than 70%
   d. lesser than 20%

3) **Seminoma is rare in patients:**
   a. younger than 10 yrs.
   b. older than 50 yrs.
   c. between 20 – 27 yrs.
   d. between 28 – 35 yrs.

4) **What is the 5-yr survival rate for a localized testicular cancer?**
   a. over 80%
   b. over 85%
   c. over 90 %
   d. over 95 %

5) **Which of the following is NOT a risk factor for developing testicular cancers?**
   a. environmental conditions exposing the testes to high temperature
   b. 47XXY genotype
   c. prior testicular cancers
   d. cryptorchidism

6) **What is false regarding testicular cancer and cryptorchidism?**
   a. the risk of developing germ cell tumor when an undescended testis is in the abdomen is greater than when it is in the inguinal canal
   b. orchiopexy for boys younger than 6 yrs. lowers the risk of cancer development
   c. a normally descended testis carries 5-20% risk of developing cancer when its mate is undescended
   d. the risk of cancer increases in cryptorchid patients over 33 yrs. of age

7) **Clinically, what does NOT mimic testicular cancer?**
   a. epididymo-orchitis
   b. indirect inguinal hernia
   c. testicular microlithiasis
   d. syphilitic gumma

8) **What is true regarding radical inguinal orchiectomy for testicular cancer?**

a. considered based on a histologic evidence
b. should not be performed through a scrotal incision
c. preoperative biopsy is required for histologic examination
d. entails early clamping of the cord at the external inguinal ring level

9) What is the commonest testicular cancer in infants and young children?

a. choriocarcinoma
b. yolk cell tumor
c. embryonal carcinoma
d. seminoma

10) What is false concerning tumor markers of seminoma?

a. pure seminoma α-FP is normal
b. syncytiotrophoblastic giant cells are present, β-hCG may be elevated
c. spermatocytic seminomas rarely metastasize without sarcomatous differentiation
d. pure seminoma constitutes approximately 90% of pure germ cell tumors

11) What is false regarding spermatocytic seminoma?

a. occurs in men over 60 yrs.
b. does not contain an isochromosome 12p
c. constitutes a considerable part of mixed germ cell tumors
d. rarely metastasizes without sarcomatous differentiation

12) Testicular germ cell tumors that produce only α-FP are:

a. yolk cell tumors
b. choriocarcinomas
c. embryonal carcinomas
d. pure seminomas

13) In testicular cancer patients with residual disease after chemotherapy, what type is found in approximately 45% of resected specimens?

a. polyembryoma
b. teratoma
c. embryonal carcinoma
d. mixed germ cell tumor

14) Seminomas are classified as "good risk" when which of the following is (are) present:

a. stem from the periphery of the testis
b. non-pulmonary visceral metastases
c. normal α-FP, β-hCG, and LDH markers
d. all of the above

15) What is true regarding biological markers of testicular cancers?

a. high levels of α-FP are found only in non-seminomas
b. high levels of α-FP may result from marijuana use
c. β-hCG levels above 10,000 mIU/mL are seen only in germ cell tumors and hepatocellular carcinoma

d. LDH is a useful marker for surveillance after tumor extirpation

16) Which of the following statements is false concerning testicular tumor markers?

a. α-FP and/or β-hCG are elevated in approximately 80% to 85% of patients with non-seminomatous germ cell tumors
b. β-hCG increases in either seminoma or non-seminoma
c. LDH increases in 30% to 80% of pure seminoma patients and in 60% of non-seminoma patients
d. high levels of α-FP might induce nipple tenderness or gynecomastia

17) What is false concerning testicular tumor markers?

a. elevation of only α-FP indicates pure non-seminoma
b. elevation of α-FP might occur in chronic liver disease, hepatitis, and alcohol abuse
c. elevation of LDH indicates tumor burden and growth rate
d. elevation of β-hCG above 10,000 mIU/mL is seen only in germ cell tumors

18) What is false concerning post orchiectomy in clinical stage I seminoma?

a. active surveillance is recommended for patients with horseshoe kidney
b. adjuvant chemotherapy with a single dose of carboplatin is recommended as an alternative to radiation therapy
c. the number of positive nodes dissected dictates the number of chemotherapy cycles to be given
d. cure is possible after radical orchiectomy alone

19) What is false concerning surgical care for testicular cancer patients?

a. patients in whom retroperitoneal LN dissection (RPLND) reveals viable cancer cells after chemotherapy, subsequent chemotherapy is recommended
b. surgical resection is recommended for patients with residual disease after chemotherapy
c. open nerve-sparing RPLND might lead to premature ejaculation
d. non-seminoma patients stage I-A, I-B, 1S on long-term surveillance, relapses are expected in 80% of cases within the first year after orchiectomy

20) What is false concerning medical care for testicular cancer patients?

a. approximately 60% of patients, post-chemotherapy residual masses are either viable cancer cells or teratoma
b. nearly one half will be azoospermic after 2 years of therapy
c. seminoma stage II-B, primary chemotherapy with 3 cycles of bleomycin, etoposide and cisplatin (BEP), and 4 cycles of chemotherapy with etoposide and cisplatin (EP) are recommended
d. seminoma stage II-B, II-C, III after primary treatment with chemotherapy, surveillance is recommended for residual masses of 3 cm or less detected by PET scan

21) What is false concerning intratubular germ cell neoplasia (ITGCN) of the testes?

a. adult choriocarcinoma arise from ITGCN
b. spermatocytic seminoma arises from ITGCN
c. typically, pediatric germ cell tumors (GCT) do not arise from ITGCN

d. ITGCN is the common precursor for most of adult male GCT

22) With regard to pure subtypes of testicular tumors, which statement is false?

a. pure embryonal carcinoma may increase serum α-FP and hCG levels
b. pure seminoma increases serum hCG levels in 15% of cases but not α-FP
c. typically, endodermal sinus tumors don't increase any tumor marker
d. pure choriocarcinoma is associated with high hCG levels but not α-FP

23) On managing testicular tumors, testis-sparing surgery is NOT indicated in:

a. suspected germ cell tumor (GCT) with a normal contralateral testis
b. case of bilateral synchronous testicular GCT
c. suspected benign testicular lesions
d. suspected GCT of < 2 cm tumor size in a solitary testis

24) What is true regarding brain metastases of testicular cancers?

a. should be suspected in any patient with a very high hCG level on diagnosis
b. the commonest subtype that causes brain metastases is choriocarcinoma
c. these patients should receive 4 cycles of bleomycin-etoposide-cisplatin as first-line chemotherapy
d. early initiation of chemotherapy ensures a good prognosis

25) What is false concerning teratoma of the testis?

a. there is no clinical distinction between mature and immature teratoma
b. has no biological markers
c. sensitive to chemotherapy
d. when large in size can be infiltrative and difficult to resect

26) Late toxicity of chemotherapy for testicular cancers might result in all of the following, EXCEPT:

a. peripheral neuropathy
b. renal failure
c. Raynaud phenomenon
d. hypogonadism

27) What is the most common testicular neoplasm in men over 50?

a. lymphoma
b. spermatocytic seminoma
c. adenocarcinoma
d. cystadenoma

28) Leydig cell tumors and Sertoli cell tumors are benign in:

a. 60%
b. 70%
c. 80%
d. 90%

29) What epididymal lesion is associated with von Hippel–Lindau syndrome?

a. mature teratoma

b. immature teratoma
c. cystadenoma
d. adenomatoid tumor

30) What is the most common para-testicular tumor in adults?

a. rhabdomyosarcoma
b. liposarcoma
c. sarcomatoid tumor
d. angiosarcoma

31) What is the most common para-testicular tumor in children?

a. rhabdomyosarcoma
b. liposarcoma
c. sarcomatoid tumor
d. angiosarcoma

32) Which subtype of germ cell tumors has the highest propensity for hematogenous spread?

a. yolk cell tumors
b. spermatocytic seminoma
c. choriocarcinoma
d. embryonal carcinoma

33) In seminomas, the risk factor(s) for metastases (is) are:

a. rete testis involvement
b. tumor size greater than 4 cm
c. all of the above
d. β-hCG of ≥ 10,000 mIU/mL on diagnosis

34) Testicular cancer patients with bulky retroperitoneal lymph node disease greater than 3 cm should:

a. undergo laparoscopic lymph node sampling
b. receive induction chemotherapy
c. undergo extensive retroperitoneal lymph node dissection
d. for palliative therapy

35) What is true regarding retroperitoneal lymph nodes involvement in testicular cancers?

a. left testicular tumors spread to the periaortic lymph nodes
b. right testicular tumors spread to the interaortocaval lymph nodes
c. the fashion of further spread in the retroperitoneum is from right to left
d. all of the above

36) What is false concerning testicular germ cell tumors (GCT)?

a. a patient with a history of GCTs, the finding of testicular microlithiasis on ultrasonography poses a higher risk of intratubular germ cell neoplasia
b. occur bilaterally approximately 2% of cases
c. are extragonadal in 1 - 5%
d. are more likely to contain embryonal tumor cells than tumors arising in the testis

37) On presentation, what is the percentage of infertility among testicular germ cell tumor patients?

a. 10 - 20%
b. 20 - 60%
c. 60 - 80%
d. 80 - 90%

38) What is the role of positron emission tomography (PET) in testicular cancer patients?

a. evaluates post chemotherapy residual masses in pure seminoma cases
b. helps stage non-seminomatous germ cell tumors
c. all of the above
d. used for active surveillance in non-operable cases

39) After chemotherapy for testicular cancers, how long does it take for spermatogenesis to return to the norm?

a. 3 months
b. 3 spermatogenic cycles
c. 3 yrs.
d. damage is permanent

40) What is the commonest site of cancer occurrence in the male urethra?

a. fossa navicularis
b. bulbomembranous urethra
c. prostatic urethra
d. external urethral meatus

ANSWERS TO TUMORS OF THE TESTES

1-c self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

2-a self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

3-a self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

4-d by stage, 5-year relative survival is 99.2% for patients with localized testicular cancer, 96.1% for patients with cancer that has spread to regional lymph nodes, and 73.2% for patients with metastatic disease. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

5-a increased scrotal temperature have not been associated with increased risk. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

6-d the risk of cancer decreases in cryptorchid patients over 33 yrs. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

7-c microlithiasis of testes are tiny calcifications in the testes that are clinically not palpable. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

8-b it is contraindicated to perform radical orchiectomy through a scrotal incision because of the risk of upgrading the tumor. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

9-b yolk cell tumors (endodermal sinus tumor), are the most common testicular tumor in infants and young children. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

10-d pure seminoma constitutes roughly 50% of pure germ cell tumors. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

11-c does not occur as part of mixed germ cell tumor. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

12-a yolk cell tumors are associated with elevated α-FP levels but they do not produce β-hCG. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

13-b self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

14-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

15-a pure seminomas don't produce α-FP. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

16-d patients with high levels of β-HCG may experience nipple tenderness or gynecomastia. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

17-a elevation of only α-FP indicates non-seminomatous or mixed germ cell tumors. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

18-c the statement is true for non-seminomas. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

19-c the procedure might lead to retrograde ejaculation because seminal emission and bladder neck closure are both mediated by the L_1-L_4 postganglionic
sympathetic nerve fibres vulnerable to resection during RPLND. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

20-c the recommended primary chemotherapy is either 3 cycles of BEP or 4 cycles of EP; but not together. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

21-b ITGCN is the common precursor for most of adult male GCT except spermatocytic seminoma.

Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

22-c endodermal sinus tumor (yolk cell tumors) are associated with increased α-FP but not β-hCG. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

23-a in this condition formal radical orchiectomy should be performed. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

24-d prognosis is poor. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

25-c teratoma is chemo-resistant. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

26-b in addition to the indicated SE, hearing loss, infertility, secondary malignancies, and cardiovascular disease. Renal failure is not a known toxicity. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

27-a self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

28-d 90% are benign, while 10% are malignant. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

29-c self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

30-b self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

31-a self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

32-c self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

33-c self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

34-b self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

35-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

36-d are more likely to contain yolk sac tumor elements than tumors arising in the testis. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

37-b self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

38-a self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

39-c self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

40-b the bulbous part is the commonest area of strictures and cancers. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

TUMORS OF THE PROSTATE

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **Screening for prostate cancer is recommended for men who are:**
   a. average risk, aging 50 yrs., and have at least a 10-year life expectancy
   b. aging 40 yrs., and had a first-degree relative diagnosed with prostate cancer before age 65
   c. aging 40 yrs., African Americans
   d. all of the above

2) **What is false regarding the diagnosis of prostate cancer?**
   a. most cases are identified by screening asymptomatic men
   b. physical examination alone cannot reliably differentiate benign prostatic conditions from cancer
   c. most diagnosed cases have normal DRE and PSA values
   d. prostate biopsy establishes the diagnosis

3) **Genetically, increased risk of prostate cancer has been found in men with:**
   a. variants in the 8q24 region on chromosome 8, in sporadic cases
   b. alterations on chromosome 1, chromosome 17, and the X chromosome, in some familial cases
   c. the human prostate cancer gene is on the X chromosome
   d. all are true

4) **Genetically, what are the changes associated with poor survival in prostate cancer patients?**
   a. loss of one or both copies of the tumor suppressor gene PTEN
   b. TMPRSS2–ERG chromosome fusion
   c. P53 mutations and overexpression of MYC
   d. all of the above

5) **In which of the following cases PSA testing is NOT indicated:**
   a. 72 yrs. man newly diagnosed BPH with normal DRE
   b. 2 weeks post TURP for obstructing cancerous prostate
   c. screening for prostate cancer in 75 yrs. old Caucasian man
   d. 43 yrs. man with obstructive LUTS, who had a first-degree relative diagnosed with prostate cancer before age 65

6) **In which of the following PSA readings prostate cancer is least suspected?**
   a. PSA velocity of 0.35 ng/mL/y, when the PSA is $\leq$ 2.5 ng/mL
   b. PSA velocity of 0.75 ng/mL/y, when the PSA is 4 – 10 ng/mL
   c. t-PSA is 2.8 ng/mL, f-PSA 0.94 ng/mL
   d. t-PSA is 3.7 ng/mL, f-PSA 0.51 ng/mL

7) **In which of the following situations prostate biopsy is most indicated?**
   a. normal DRE, abnormal PSA
   b. abnormal DRE, abnormal PSA

c. abnormal DRE, normal PSA
d. hyperechoic areas on TRUS

8) What is false concerning Gleason scoring system for prostate cancers?

a. ranges from 0 -10 based on a histologic evaluation of tumor specimens
b. based on the 2 most common histologic patterns
c. greatly relies on the skills and experience of the pathologist
d. a score of 7 indicates a moderate-grade or moderately differentiated tumor

9) What class of prostate cancer medications causes an initial increase in LH, FSH levels and consequently a rise in testosterone level for few weeks?

a. GnRH agonists
b. antiandrogens
c. antimicrotubular
d. bisphosphonates

10) What is false concerning antiandrogen class of prostate cancer medications?

a. commonly used in combination with a GnRH agonist
b. less effective than medical or surgical castration
c. not recommended for localized prostate cancer
d. inhibits various cytochrome P-450 enzymes

11) What is true regarding prostatic tissue levels of hK_2?

a. intensely expressed in benign prostatic epithelium
b. increased in poorly differentiated prostate cancer tissue
c. helps differentiate benign from malignant causes of high t-PSA
d. an organ but not pathology specific marker

12) What if false concerning the prostate cancer marker PCA_3?

a. entails a genetic analysis of cells in the voided urine
b. urine sample is collected after a firm massage of the prostate
c. helps screen patients who are at intermediate risk of cancer
d. helps avoid the inconvenience of prostate biopsy

13) BPH patients on finasteride longer than 6 months are expected to have:

a. decreased t-PSA but increased f-PSA
b. decreased t-PSA but unaltered f-PSA
c. decreased t-PSA and decreased f-PSA
d. any of the above

14) Prostate-specific membrane antigen has been detected in:

a. the prostate gland only
b. the central nervous system, intestine, and the prostate
c. malignant ovarian cysts, skeletal muscles, and the prostate
d. thyroid glands, adrenals, and the prostate

15) Ectopic expression of PSA occurs in all of the following, EXCEPT:

a. thyroid gland

b. breast tissue
c. adrenal glands
d. renal carcinomas

16) What is false concerning prostate cancer?

a. the most common cause of mortality in men with prostate cancer is cardiac disease
b. the second most common cause of cancer death in males
c. androgens have a pivotal role in prostate cancer development
d. low protein and high carbohydrate diet play a role in the development of prostate cancer

17) What is true surrounding PSA?

a. black individuals produce more PSA than whites
b. ejaculation can lead to a false decrease in PSA
c. pro-PSA is the serum proactive form of PSA molecule
d. prostate cancer cells make more PSA than normal prostate tissues do

18) What condition does NOT appear as a hypoechoic lesion in the prostate on TRUS?

a. prostate cancer
b. corpora amylacea
c. transitional zone
d. tuberculous prostatitis

19) What is true concerning TRUS prostatic biopsy?

a. hematospermia might persist for 4 – 6 weeks after taking biopsies
b. quinolone antibiotics prophylaxis eliminate possible infections
c. the right lateral decubitus position is commonly preferred
d. only hypoechoic lesions should be biopsied

20) Solid lesions in the seminal vesicles are most likely to be a result of:

a. imperfect prostate biopsies
b. immature teratoma
c. schistosomiasis
d. liposarcoma

21) What is false concerning TRUS prostatic biopsy?

a. a 12-core biopsy is the standard
b. preparation for the procedure, a self-administered enema is suggested
c. sepsis might complicate the procedure
d. the biopsy path is best visualized in the coronal plane

22) What is true about the usefulness of Gleason scoring system?

a. used to stage prostate cancer
b. a specimen of grade 3 + 4 is worse than 4 + 3
c. a sum of 6 suggests an intermediate risk for aggressive cancer
d. has a role in guiding the appropriate treatment options

23) What is false concerning the interpretation of Gleason scoring system?

a. a low score means the cancer tissue is similar to normal prostate tissue

b. indicates how likely the tumor will spread
c. the more cellular atypia observed the higher scoring will be
d. relies only on the glandular architectural pattern

24) What is false regarding prostate adenocarcinoma in the peripheral zone?

a. 85% of prostate adenocarcinomas are located in the peripheral zone
b. 15% of them are multifocal
c. they tend to extend outside the prostate through the perineural space
d. the presence of perineural invasion does not worsen the prognosis

25) In descending order, to where do prostate cancers metastasize?

a. lymph nodes, bone, lung, bladder, liver, and adrenal glands
b. bone, lung, lymph nodes, liver, bladder, and adrenal glands
c. lung, liver, lymph nodes, bone, adrenal glands, and bladder
d. liver, lung, bone, lymph nodes, bladder, and adrenal glands

26) What is true regarding seminal vesicles` involvement in prostate cancer?

a. almost always due to direct extension (T2c)
b. is involved in 85% of positive surgical margins following radical prostatectomy
c. carries a poor prognosis
d. none of the above

27) What is false regarding the histology of prostatic cancers?

a. benign glands are different from malignant glands, as they contain basal cells
b. adenosis in the transitional zone carries 15% increase in cancer risk
c. the prostate has no discrete histologic capsule
d. intraductal carcinoma is morphologically worse than high-grade PIN and is typically associated with high-grade carcinoma

28) Which of the following tests has the highest positive predictive value for prostate cancer?

a. PSA
b. digital rectal examination
c. transrectal ultrasonography
d. human kallikrein 2

29) What pathologic findings after radical prostatectomy are predictive for occult metastases?

a. seminal vesicle invasion and lymph node metastases
b. positive surgical margins and seminal vesicle involvement
c. capsular penetration and lymph node metastases
d. rectal and bladder neck involvement

30) What fraction of men with a PSA value between 4 and 10 ng/mL has an organ-confined prostate cancer?

a. ⅓
b. ¼

c. ½
d. ⅔

31) Which PSA value interpretation is incorrect?

a. > 50% of men with PSA > 10 ng/mL have the disease beyond the prostate
b. pelvic lymph node involvement is found in PSA > 20 ng/mL
c. 70% of men with a PSA between 4 and 10 ng/mL have organ-confined disease
d. 80% of men with PSA < 4 ng/mL have organ-confined disease

32) Partin tables are probability tables for the determination of pathologic stages of prostatic cancers based on:

a. preoperative clinical stage, PSA level, and Gleason sum
b. seminal vesicle invasion, lymph node metastases, and Gleason sum
c. positive surgical margins, capsular penetration, and PSA level
d. PSA level, perineural invasion, vascular metastasis, and Gleason sum

33) For prostate cancer patients, what do Partin tables predict?

a. survival rate
b. pathologic stage
c. extracapsular extension
d. lymph node involvement

34) Which factor is closely related to the return to urinary continence function after radical retropubic prostatectomy?

a. pathologic tumor stage
b. performing nerve-sparing surgery
c. patient`s age
d. performing internal sphincter micro-dissection

35) Which factor(s) determine(s) the return to normal erectile function after radical retropubic prostatectomy?

a. the age of the patient
b. preoperative potency status
c. extent of nerve-sparing surgery
d. all of the above

36) What is the likelihood that patients with positive surgical margins after radical prostatectomy will be cured for prostate cancer?

a. never
b. unlikely
c. likely
d. always

37) Fill the blanks: "on treating prostate cancer patients, the median time from PSA failure to the development of metastatic disease after radical prostatectomy is approximately (…) yrs. and from the time of metastases to death is approximately (…) yrs.".

a. 4, 2 respectively

b. 8, 5 respectively
c. 6, 3 respectively
d. 7, 4 respectively

38) Regarding treating prostate cancer patients, watchful waiting is a reasonable option for:

a. patients who have a life expectancy ≤ 10 yrs. and/or well to moderately differentiated cancer
b. ≥ 70 yrs. of age
c. PSA < 10 ng/mL, ratio < 0.22
d. patients with good performance status

39) Regarding treating prostate cancer patients, watchful waiting strategy involves:

a. periodic PSA testing
b. periodic TRUS
c. all of the above
d. none of the above

40) During retropubic radical prostatectomy, what complication could be encountered on dividing the dorsal vein complex anteriorly?

a. incontinence
b. retrograde ejaculation
c. impotence
d. anejaculation

41) Regarding radical prostatectomy, the commonest site of positive surgical margins is the:

a. apex
b. posterior
c. postero-lateral
d. anterior

42) What advantage does laparoscopic/robotic prostatectomy has over open surgery in treating prostate cancers?

a. preserving potency
b. avoiding incontinence
c. less bleeding
d. all of the above

43) What are the possible complications of CO_2 pneumoperitoneum during laparoscopic/robotic prostatectomy?

a. hypoxia and acidosis
b. tachycardia and tachypnea
c. bradycardia and hypotension
d. hypercarbia and oliguria

44) In descending order, the commonest complications of external beam radiation therapy for prostate cancer are:

a. urethral stricture, impotence, and rectal bleeding

b. impotence, rectal bleeding, and urethral stricture
c. impotence, urethral stricture, and rectal bleeding
d. rectal bleeding, impotence, and urethral stricture

45) What is the proper pre-treatment risk stratification of prostate cancer for a patient with T2a, PSA < 11 ng/mL, and no Gleason score > 6?

a. low risk
b. intermediate risk
c. high risk
d. data not adequate

46) Concerning prostate cancers, a pre-treatment PSA velocity of > 2 ng/mL/yr is associated with an increased risk of:

a. pathological bone fractures
b. biochemical failure following radiation therapy
c. hepato-renal disease following chemotherapy
d. upgrading the pre-treatment risk stratification

47) What are the clinical parameters of tissue ablation achieved by cryotherapy for cancer cells destruction?

a. the number of freezing cycles
b. the lowest temperature achieved
c. the existence of regional "heat sinks"
d. all of the above

48) What is the likelihood that prostate cells die in a single freeze cycle of cryotherapy when tissue temperature reaches colder than - 40^0 C?

a. never
b. unlikely
c. likely
d. always

49) What is the primary mechanism of prostate tissue ablation using high-intensity focused ultrasound?

a. disruption of protein synthesis
b. coagulative necrosis
c. cell wall destruction
d. DNA damage

50) What is the commonest complication of high-intensity focused ultrasound on treating localized prostate cancer?

a. temporary incontinence
b. vasculogenic impotence
c. urinary retention
d. hyper-reflexive detrusor

51) What is against using TRUS-guided therapy for focal prostate cancer?

a. overdiagnoses clinically insignificant cancers
b. misses clinically significant cancers in the anterior or apical regions
c. may underrepresent true cancer burden
d. all of the above

52) Clinically significant prostate cancer is defined as:

a. volume ≥ 0.5 mL and/or a Gleason score of ≥ 3 + 4
b. volume ≥ 0.8 mL and/or a Gleason score of ≥ 4 + 4
c. volume ≥ 1.5 mL and/or a Gleason score of ≥ 4 + 3
d. volume ≥ 1.0 mL and/or a Gleason score of ≥ 3 + 3

53) What is false concerning thawing procedure to treat prostate cancer cells?

a. slow thawing is more effective than rapid thawing
b. the most common complication is erectile dysfunction
c. for effective thawing a minimum temperature of − 25° C and a double freeze/thaw cycle with urethral warming are recommended
d. the two most common modalities employed in focal therapy are high-intensity focused ultrasound and cryosurgery

54) All of the following modalities are used as salvage therapies after failing radiation therapy for prostate cancer treatment, EXCEPT:

a. cryotherapy
b. chemotherapy
c. brachytherapy
d. radical prostatectomy

55) What is the major advantage of neoadjuvant androgen deprivation before radical prostatectomy on treating clinical stages (cT1-T2) prostate cancers?

a. reduces positive surgical margins
b. reduces local recurrence
c. has no proven advantage
d. reduces cardiac complications

56) Regarding radiotherapy for prostate cancer, what is the lowest recommended dose for salvage therapy?

a. 54 Gy
b. 64 Gy
c. 74 Gy
d. 84 Gy

57) Regarding chemotherapy for prostate cancers, nonsteroidal antiandrogens will result in:

a. elevated LH, elevated testosterone, elevated estrogen
b. elevated LH, elevated testosterone, declined estrogen
c. declined LH, declined testosterone, elevated estrogen
d. declined LH, elevated testosterone, declined estrogen

58) Following bilateral orchiectomy for prostate cancer, testosterone will:

a. initially drop to nadir, and then recover over 2 weeks
b. decline by 50% within 2 weeks and then normalize
c. decline by 90% within 24 hours
d. decline by 70%

59) What is the first-line chemotherapeutic agent for metastatic castration-resistant prostate cancer?

a. bisphosphonate
b. docetaxel
c. sipuleucel-T
d. enzalutamide

ANSWERS TO TUMORS OF THE PROSTATE

1-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

2-c most diagnosed cases have normal DRE but abnormal PSA readings. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

3-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

4-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

5-c the ACP advises against screening for prostate cancer for men over 69. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

6-c PSA ratio, in this case, is 33% which is on the benign side. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

7-b the possibility of cancer detection is highest when PSA and DRE are abnormal. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

8-a it ranges from 2 – 10, as the lowest score given to a section of two is 1. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

9-a Gonadotropin-releasing hormone (GnRH) agonists bind to the GnRH receptors on pituitary gonadotropin-producing cells, causing an initial release of LH and FSH. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

10-d they bind to androgen receptors and competitively inhibit their interaction with testosterone and DHT. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

11-b self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

12-c PCA_3 is not for screening. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

13-c as both free and total PSA decline, PSA ratio is not altered significantly. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

14-b self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

15-a self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

16-d fat intake and obesity may play a role in the development of prostate cancer. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

17-a self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

18-b corpora amylacea are calcifications within the prostate gland that appear densely hyperechoic. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

19-a self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

20-c self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

21-d the biopsy path is best visualized in the sagittal plane. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

22-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

23-c Gleason system relies only on glandular architecture, not cellular atypia. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

24-b 85% of them are multifocal. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

25-a the correct sequence is lymph nodes, bone, lung, bladder, liver, and adrenal glands. Smith and

Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

26-c self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

27-b adenosis in the transitional zone carries no increased risk for cancer. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

28-a among the listed choices, PSA is the highest. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

29-a the finding of seminal vesicle invasion and lymph node metastases are associated with a high risk of distant disease. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

30-d two-thirds of men with PSA between 4 and 10 ng/mL have organ-confined cancer. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

31-b pelvic lymph node involvement is found in nearly 20% of men with PSA > 20 ng/mL. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

32-a self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

33-b Partin tables are probability tables for the determination of pathologic stage based on 3 parameters: preoperative clinical stage, serum PSA level, and Gleason sum. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

34-c self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

35-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

36-c most patients with positive surgical margins are cured by radical prostatectomy. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

37-b thus there is a total of 13 years beginning from the onset of detectable PSA to death due to prostate cancer. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

38-a self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

39-d watchful waiting aims at limiting interventions and following patients closely for complaints. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

40-a incontinence due to injury to the striated urethral sphincter. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

41-a the apex, followed by the posterior and the postero-lateral prostate. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

42-c the tamponade effect from the pneumoperitoneum helps diminish blood loss during laparoscopic/robotic prostatectomy. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

43-d hypercarbia and oliguria are possible complications of insufflation with CO_2 and pneumoperitoneum. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

44-b impotence in 50%, rectal bleeding in 10%, urethral stricture is far less. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

45-a criteria of low risk are T1c-T2a, PSA less than 11 ng/mL and no Gleason score higher than 6. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

46-b self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

47-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S.

Howards MD, Michael E. Mitchell MD.

48-d to achieve complete cell death, temperatures lower than − 40° C are required. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

49-b HIFU results in mechanical and thermal effects on tissues leading to coagulative necrosis. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

50-c HIFU results in acute swelling of the prostate gland and urinary retention that last 1 to 2 weeks. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

51-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

52-a self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

53-c for effective thawing a minimum temperature of − 40° C and a double freeze/thaw cycle with urethral warming are recommended. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

54-b self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

55-a in men with lower clinical stage (cT1-T2), androgen deprivation shows a reduction in positive surgical margins. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

56-b as per the American Society for Therapeutic Radiation Oncology (ASTRO) guidelines, 64 Gy is the lowest recommended dose for salvage radiotherapy. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

57-a nonsteroidal antiandrogens block androgen receptors, including those in the hypothalamic-pituitary axis. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

58-c self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

59-b self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

BENIGN URETHRAL CONDITIONS

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **What is false concerning the pathophysiology of posterior urethral valve (PUV)?**
   a. they are formed at about the 4th week of gestation
   b. they are formed by the fusion of the Wolffian duct with the cloaca
   c. almost all patients born with PUVs progress to end-stage renal disease
   d. type I- PUV accounts for 95% of cases

2) **What is false concerning the pathophysiology of detrusor muscle in posterior urethral valve cases?**
   a. the obstructive process leads to increased collagen deposition and detrusor hypertrophy
   b. during filling, hypertrophy the detrusor muscle along with increases in connective tissue limit bladder compliance
   c. as patients grow up, bladder decompensation may occur, resulting in detrusor failure and spacious bladder
   d. during infancy, bladder emptying occurs at low intravesical pressures

3) **In modern medical practice, the commonest presentation of posterior urethral valve is:**
   a. recurrent UTI in infancy
   b. antenatal hydronephrosis
   c. childhood voiding dysfunction
   d. childhood enuresis

4) **A newborn with posterior urethral valve may have the following manifestations, EXCEPT:**
   a. bladder rupture
   b. forniceal rupture
   c. pulmonary distress
   d. limb deformities

5) **What is NOT a clinical feature of posterior urethral valve fetus?**
   a. pulmonary hypoplasia
   b. thickened bladder wall
   c. bilateral upper urinary tract dilation
   d. polyhydramnios

6) **The commonest cause of neonatal fatality in posterior urethral valve neonates is:**
   a. uremic encephalopathy due to renal failure
   b. sepsis due to urinary tract infections
   c. respiratory failure due to pulmonary hypoplasia
   d. cardiac arrhythmia due to electrolytes imbalance

7) **A toddler boy presents with urinary incontinence, abdominal pain, repeated UTIs. Renal ultrasonography shows moderate bilateral hydroureteronephroses. Next step in the management would be:**
   a. voiding cystourethrography

b. uroflowmetry
c. cystoscopy and retrograde ureterography
d. ascending urethrocystography

8) What condition(s), radiologically, mimic(s) antenatal fetal hydronephrosis?

a. obstructed megaureter
b. multicystic kidney
c. renal cystic disease
d. all of the above

9) Up to what size of neonatal renal pelvis diameter is normal?

a. 8 mm
b. 10 mm
c. 12 mm
d. 14 mm

10) In a suspected case of UPJ obstruction, beyond what intrarenal pelvis pressure is high?

a. 16 cm H_2O
b. 18 cm H_2O
c. 20 cm H_2O
d. 22 cm H_2O

11) What imaging study is diagnostic for posterior urethral valve?

a. ascending urethrocystography
b. voiding cystourethrography
c. intravenous urography
d. Tc-dimercaptosuccinic acid

12) What are the diagnostic signs of posterior urethral valve on voiding cystourethrography?

a. visualization of the valve leaflets
b. thickened trabeculated bladder and hypertrophied bladder neck
c. dilated or elongated posterior urethra
d. all of the above

13) What renal scintigraphy helps judge the renal cortical function in a child with posterior urethral valve, and when combined with furosemide provides information about renal drainage and possible obstruction?

a. Tc-dimercaptosuccinic acid (DMSA)
b. diethylene triamine pentaacetic acid (DTPA)
c. all of the above
d. mercaptoacetyltriglycine (MAG-3)

14) A newborn with a suspected posterior urethral valve, the first step in management is to:

a. set a baseline renal function
b. relief obstruction by passing a urethral catheter
c. confirm the diagnosis by performing voiding cystourethrography
d. repeat ultrasonography and compare it to the antenatal image

15) What is improper in managing a newborn with posterior urethral valve?

a. the valve can be incised at the 12, 5, and 7-o'clock positions, with either a cold knife or an electrocautery
b. cutaneous ureterostomies are reserved only for patients with ureterovesical junction obstruction
c. vesicostomy always help relief upper tract dilations
d. while awaiting surgery, placing a 5-Fr urethral catheter and initiating a prophylactic antibiotic are advised

16) Potential complications following augmentation cystoplasty for a posterior urethral valve child include all of the following, EXCEPT:

a. bladder rupture
b. high voiding pressure
c. electrolyte disturbances
d. mucus production

17) An antenatal ultrasonography reveals signs of posterior urethral valve, fetal bladder drainage will:

a. improve lung function in neonates
b. eliminate the need for vesicostomy
c. mandate prophylactic antibiotics
d. predispose to amniotic fluid aspiration

18) All of the following ailments are related to the "valve bladder syndrome", EXCEPT:

a. hyper reflexive detrusor
b. vesicoureteral obstruction
c. narrow proximal urethra
d. renal tubular and glomerular impairment

19) What is the most common type of posterior urethral valve?

a. type I
b. type II
c. type III
d. comparable

20) What type of posterior urethral valves is a membrane in nature that transversely crosses the urethra?

a. type I
b. type II
c. type III
d. all fit this description

21) What is the likelihood that posterior urethral valve patients have hydroureteronephrosis?

a. never
b. unlikely

c. likely
d. always

22) Concerning posterior urethral valve patients, what is the likelihood that ablation of the valve and/or vesicostomy will treat vesicoureteral reflux?

a. never
b. unlikely
c. likely
d. always

23) Anterior urethral valve anomaly often occurs in the form of a:

a. membrane
b. fold
c. diverticulum
d. stenosis

24) In valve bladder patients, polyuria is due to:

a. nephrogenic diabetes insipidus
b. overflow incontinence
c. hyper reflexive detrusor
d. none of the above

25) In urethral duplication anomaly, the ventral urethra is usually:

a. blind ended
b. the functional urethra
c. hypoplastic
d. wide calibre

26) Management of a newborn with hypospadias and cryptorchidism should:

a. at the same operative session
b. include karyotyping
c. deferred until the child is 2 yrs.
d. handled by a plastic surgeon

27) What is the most common reason for difficult urethral catheterization during hypospadias repair?

a. enlarged prostatic utricle
b. elevated uvula vesica
c. associated posterior urethral valve anomaly
d. associated cecoureterocele anomaly

28) Which of the following does NOT reduce the incidence of fistula development after hypospadias repair?

a. stenting the urethra until scabs fall
b. closing up the corpus spongiosum edges over the neourethra
c. using monofilament stitches
d. avoiding overlapping suture lines

29) Following hypospadias repair:

a. the meatus should calibrate to 8 to 10 Fr
b. topical antibiotics should be applied over sutures
c. scabs should be removed under local anesthesia
d. repeat uroflowmetry should reveal better results than pre op.

30) What is NOT a potential long-term complication after hypospadias repair?

a. uneasiness with the cosmetic appearance
b. dissatisfaction with sexual function
c. ejaculatory dysfunctions
d. suture breakdown

31) Penile curvature of greater than 30^0 can be straightened by:

a. single dorsal plication
b. ventral corporal grafting
c. penile degloving and urethrolysis
d. any of the above

32) The most common location of hypospadias is:

a. distal shaft
b. mid shaft
c. proximal shaft
d. penoscrotal

33) What is (are) technically crucial on repairing hypospadias?

a. careful tissue handling
b. using vascularised tissues
c. tension-free anastomosis
d. all of the above

34) During hypospadias surgery, the following consideration(s) is (are) technically essential:

a. meticulous hemostasis preferably by using bipolar diathermy
b. avoiding overlapping suture line
c. placement of a dartos flap over the neourethra
d. all of the above

35) In a family with no history of hypospadias, if a child was born with the anomaly, what would be the risk of next child having hypospadias?

a. 12%
b. 18%
c. 24%
d. 30%

36) Which of the following anomalies cannot be explained as a failure of the cloacal membrane to migrate caudally?

a. hypospadias
b. epispadias

c. bladder extrophy
d. all of the above

37) The principals of epispadias repair include all of the following, EXCEPT:
a. urethroplasty
b. corporoplasty
c. penile lengthening
d. chordee correction

38) The following factors impose risks on hypospadias development, EXCEPT:
a. in-vitro fertilization
b. black race
c. family history of hypospadias
d. mutations in the 5-α reductase enzyme

39) What is the preferred age for hypospadias repair?
a. after 2 yrs.
b. between 8 – 18 months
c. before school age
d. depends on the surgical technique

40) What are the possible karyotype results of a newborn with a severe degree of hypospadias and probably has a "disorder of sex development"?
a. XX virilization
b. mixed gonadal dysgenesis XY/XO
c. XY under virilization
d. any of the above

41) The commonest presentation of urethral diverticulum in women is:
a. urinary frequency, dysuria, and urgency
b. post-micturition dribbling
c. dyspareunia
d. urinary incontinence

42) The differential diagnosis of urethral diverticulum includes:
a. Skene gland abscess
b. Gartner duct cyst
c. ectopic ureter with ureterocele
d. all of the above

43) A proper pre op. evaluation of a urethral diverticulum should be performed by:
a. performing a positive-pressure urethroscopy
b. assessing the number, size, and location of the diverticulum
c. applying the L/N/S/C_3 system
d. ensuring the absence of stones and active infections

44) The preferred operation(s) for urethral diverticulum is (are):
a. marsupialization

b. partial ablation
c. diverticulectomy
d. any of the above

45) The proper indication for surgical repair of a urethral diverticulum is when:

a. the ostium is ≥ 5 mm wide located close to the sphincter
b. symptomatic
c. is evident on positive-pressure urethrography
d. harbors stones

46) Complications of urethral strictures include all of the following, EXCEPT:

a. impotence
b. bladder stones
c. urethral fistula
d. periurethral abscess

47) Urethral strictures are, routinely, evaluated by all of the following, EXCEPT:

a. cystoscopy
b. uroflowmetry
c. retrograde urethrography
d. urethral pressure profile

48) The unlikely cause of weak urinary stream in a 65 yrs. old man is:

a. urethral stricture
b. BPH
c. large cystocele
d. detrusor under-activity

49) When compared to posterior urethral strictures, anterior strictures are amenable to:

a. urethroplasty by flaps or grafts
b. dilation by urethral sounds
c. visual internal urethrotomy
d. ablation by laser technology

50) Up to what length can bulbar urethral strictures be excised and directly re-anastomosed without the need for tissue transfer?

a. 1 cm
b. 1.5 cm
c. 2 cm
d. 2.5 cm

51) What is the commonest cause of urethral strictures?

a. infections
b. trauma
c. congenital
d. malignancies

52) What is the commonest pathogen that could result in a urethral stricture?

a. Trichomonas vaginalis
b. Chlamydia trachomatis
c. Gonococcal urethritis
d. HIV infection

53) What is the likelihood that urethral strictures present as retention of urine?

a. never
b. unlikely
c. likely
d. always

54) On an ascending urethrogram, what anatomical structure could be mistaken for urethral stricture?

a. verumontanum
b. membranous urethra
c. prostatic utricle
d. uvula vesicae

55) Which of the following management options cannot treat a 6-mm bulbar urethral stricture?

a. medical treatment
b. permanent urethral stenting
c. dilation by urethral sounds
d. visual internal urethrotomy

ANSWERS TO BENIGN URETHRAL CONDITIONS

1-c approximately ⅓ of patients born with PUVs will progress to ESRD. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

2-d during infancy, bladder emptying occurs at high intravesical pressures. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

3-b in the era of antenatal ultrasonography, fetal hydronephrosis is the usual presentation. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

4-a bladder rupture is not a manifestation of PUV, because the process is slow and leads to significant bladder wall hypertrophy. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

5-d oligo but not poly hydramnios is a feature of PUV. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

6-c pulmonary hypoplasia is the leading cause of death in the early neonatal period. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

7-a VCUG, as the case could be a delayed presentation of PUV. Furthermore, we`ll know more about the dilated ureter whether obstructive or refluxive.

8-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

9-c > 12 mm warrants further investigations. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

10-d intrarenal pressure > 22 cm H_2O indicates obstruction. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

11-b The key to workup antenatal hydronephrosis is VCUG. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

12-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

13-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

14-b self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

15-c vesicostomy can't relief obstructions at the uretero-vesical level; which are not uncommon. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

16-b augmentation surgery lowers the intravesical pressure. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

17-a the pressure on lungs by the dilated kidneys and little amniotic fluid will be ameliorated by fetal bladder drainage. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

18-c the urethral valve causes dilated proximal urethra. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

19-a over 95% of PUVs belong to type I. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

20-c type III is not a true valve but rather a membrane lying transversely across the urethra. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

21-d virtually all valve patients have hydroureteronephrosis. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

22-c reflux will resolve in 25% to 40% of patients. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

23-c self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

24-a polyuria is due to nephrogenic diabetes insipidus secondary to renal impairment. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

25-b self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

26-b The combination of hypospadias anomaly, especially, proximal with undescended testis may indicate a disorder of sex development and requires karyotyping. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

27-a self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

28-c up to date, no study shows that outcomes are influenced by suture type. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

29-a self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

30-d wound complications might occur in the post op. period. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

31-b transection of the urethral plate and ventral corporal grafting is the suitable procedure. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

32-a approximately 80 – 85% of hypospadias occur at the subcoronal and glanular areas. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

33-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

34-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

35-a 12%. If the father has had hypospadias the risk would be 26%. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

36-a hypospadias is thought to be due to a failure of canalization of the ectodermal core at the penile urethra and median scrotal raphe areas. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

37-b corporal repair is not a part of epispadias correction surgery. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

38-b the incidence of hypospadias is higher in whites than in blacks. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

39-b genital awareness occurs at about age 18 months, that`s why it is preferred to perform surgery before that age to avoid possible psychological morbidity like guilt, fear, and anxiety. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

40-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

41-a urinary frequency and urgency occur in 40-100% of cases. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

42-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

43-c L/N/S/C_3 classification system, as L refers to location, N to number, S to size, and C to configurations. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

44-d depending on the case specifications, any of the above can be true. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

45-b surgical treatment is reserved for symptomatic cases. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

46-a self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

47-d UPP is typically for evaluating stress incontinence cases. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

48-c in males, large cystoceles are unheard of. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

49-a urethroplasty is impractical in posterior urethra because of the prostate and the external sphincter. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

50-c no need for urethroplasty for up to 2 cm bulbar strictures. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

51-b self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

52-c self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

53-c self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

54-b self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

55-a no medical treatment for urethral strictures. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

SEXUAL DYSFUNCTIONS

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **In which of the following conditions testosterone supplementation is NOT indicated?**
   a. delayed puberty
   b. idiopathic infertility
   c. symptomatic hypogonadism
   d. testicular dysgenesis

2) **Which statement is false concerning testosterone deficiency in older men?**
   a. age advances, free testosterone declines more than total testosterone does
   b. sex hormone-binding globulin increases gradually with age
   c. the diurnal rhythm of serum testosterone fluctuates sharply with age and manifests as changes in mood and cognitive function
   d. consensus on testosterone replacement in this group of patients

3) **What could NOT result of testosterone administration to men with late-onset hypogonadism?**
   a. decrease in fat-free mass and increase in fat mass
   b. increase in lean muscle mass and decrease in BMI and waist size
   c. improvement in sexual function in men with low libido
   d. improvement in glycaemic control and lipid profile

4) **What is (are) the clinical manifestation(s) suggestive of androgen deficiency in older men?**
   a. changes in mood, fatigue, and anger
   b. sleep disturbances
   c. decreased body hair
   d. all of the above

5) **All of the following are clinical manifestations of androgen deficiency in middle-age men, EXCEPT:**
   a. erectile dysfunction
   b. gynecomastia
   c. insulin deficiency
   d. visceral obesity

6) **All of the following manifestations suggest prepubertal-onset hypogonadism, EXCEPT:**
   a. sarcopenia
   b. short stature
   c. unclosed epiphyses
   d. high-pitched voice

7) **The followings are indications for testosterone treatment, EXCEPT?**
   a. hypopituitarism
   b. sexual dysfunction and low testosterone in a 40 yrs. old man
   c. asymptomatic 65 yrs. old man with significantly low total and free testosterone

d. low bone mass in a hypogonad man aging 35 yrs.

8) Which of the following is (are) contraindication(s) for testosterone treatment?

a. haematocrit > 0.54%
b. severe obstructive sleep apnoea
c. infertile man wishing to have children
d. all of the above

9) In a 55 yrs. man newly started on testosterone replacement therapy, which of the following timely changes are false?

a. improvement in erectile function and ejaculation may require up to 6 months
b. sexual interest may improve after 3 weeks of treatment, and reach a plateau in 6 weeks
c. erythropoiesis may become evident at 2 months and peaks at 4 months
d. mild increase in PSA and prostate volume, plateauing at 12 months

10) Which of the following urologic conditions is (are) related to metabolic syndrome?

a. nephrolithiasis
b. prostate cancer
c. erectile dysfunction
d. all of the above

11) Which of the following is false concerning abdominal adiposity and urologic conditions?

a. obesity is associated with an increased risk of liposarcoma of the bladder
b. obese women, weight loss may improve stress urinary incontinence
c. obesity is associated with an increased risk of prostate enlargement
d. obese men, weight loss significantly improves erectile function

12) Which of the following is true regarding obesity and urologic conditions?

a. obesity has been linked to an increased risk of subfertility in males
b. losing weight has not been hypothesized to explain floating kidneys
c. weight loss may improve urge incontinence in obese women
d. boys, weight loss gives a false impression of micropenis

13) Metabolism of serum testosterone occurs in all of the following body tissues, EXCEPT:

a. the liver
b. the kidneys
c. the prostate
d. the skin

14) As men age, which of the following hormones increase?

a. dehydroepiandrosterone
b. melatonin
c. thyroxin
d. leptin

15) Which of the following is an *absolute* contraindication for testosterone replacement therapy?

a. the presence of prostate or breast cancer

b. hematocrit > 0.55%
c. severe LUTS due to BPH
d. obstructive sleep apnoea

16) Which of the following ailments is (are) linked with erectile dysfunction?

a. smoking
b. insulin resistance
c. hypertension
d. all of the above

17) Anatomically, where is the weakest area in the corpora cavernosa?

a. the glans
b. the dorsal side
c. the ventral side
d. the root where the crura are

18) What does NOT take place during full erection?

a. increased blood flow into the corpora cavernosa and glans
b. accommodating the incoming blood by relaxation of sinusoidal smooth muscles
c. contraction of the ischiocavernosus muscles reduces the venous out flow
d. increase in intracavernous pressure and PO_2

19) Which of the following statements is false regarding the role of nitrous oxide (NO) in erection?

a. is the chief mediator of penile erection
b. stimulates the production of cGMP
c. NO released from eNOS contributes to the cessation of erection
d. NO released from nNOS contributes to the initiation of erection

20) Regarding physiologic erection, "Latch state" refers to:

a. a period of smooth muscle relaxation after prolonged contraction
b. a state of skeletal rigidity when the intracorporal pressure exceeds the systolic
c. the period between latching emissary veins till detumescence
d. the state when no more blood can enter the corpora nor it can leak out

21) All of the following statements regarding erectile dysfunction (ED) are true, EXCEPT:

a. primary ED refers to a lifelong dysfunction of unknown etiology
b. primary psychological ED is usually related to personality traits
c. psychological ED is the most common form of ED for men under 40
d. aging is the single most important factor to ED

22) At the flaccid state, the penis has the following criterion:

a. the penile venous plexus is contracted
b. the trabecular smooth muscles are relaxed
c. venous leak is evident
d. cavernosal spaces are widened

23) What causes the intracorporal smooth muscles to contract at the flaccid state?

a. intrinsic myogenic activity
b. adrenergic neurotransmission
c. endothelium-derived contracting factors
d. all of the above

24) What neural transmitter controls detumescence?

a. dopamine
b. norepinephrine
c. serotonin
d. acetylcholine

25) In what percentage of patients do LH-RH agonists result in a reduction of sexual desire?

a. 10%
b. 30%
c. 50%
d. 70%

26) Sexual dysfunction is expected after:

a. intracorporal injection of epinephrine
b. the induction of antiretroviral therapy
c. ablating urethral tumors at the membranous level
d. correction surgery of penile fracture

27) What is true regarding erectile dysfunction after renal transplantation?

a. about half of the patients continue to have ED
b. the vast majority of patients will end up having ED
c. the operation will help improve ED symptoms in > 65% of cases
d. none of the above

28) Endothelial dysfunction could explain ED in patients with:

a. hyperlipidemia
b. diabetes mellitus
c. chronic renal failure- related hypertension
d. all of the above

29) In males, testosterone does NOT:

a. boosts sexual desire
b. increases the frequency of sexual attempts
c. increases the number of nocturnal erections per night
d. augments the visually erotic stimuli

30) Risk factors for erectile dysfunction do NOT include:

a. passive cigarette smoking
b. stroke
c. penile fracture
d. priapism

31) In contrast to psychological ED, organic ED is characterized by the following:

a. abrupt onset
b. stable symptoms
c. normal nocturnal erection
d. favorable response to PDE inhibitors

32) What is false concerning the IIEF-5 questionnaire (SHIM) for ED?

a. 5 questions with 5 scores in each
b. a sum of 7 indicates mild ED requiring no treatment
c. questions the patient over the past 6 months
d. covers the aspects of erection initiation, maintenance, and satisfaction

33) What is false concerning erectile dysfunction questionnaires:

a. are self-administered
b. enquire patient`s complaints as well as patient`s satisfaction
c. help follow up patients on treatment including those with penile implants
d. are subjectively reliable

34) What is the most compelling pre op. test for a 55 yrs. ED patient going for penile arterial revascularization?

a. penile angiography
b. penile duplex ultrasonography combined with pharmaco-stimulation
c. dynamic infusion cavernosometry and cavernosography
d. all are comparable

35) Self-administered intracavernosal pharmacotherapy for ED is indicated most for patients with:

a. history of priapism
b. poor manual dexterity
c. severe coagulopathy
d. arteriogenic ED

36) Endocrine conditions that may be associated with erectile dysfunction include all of the following, EXCEPT:

a. hypogonadism
b. pheochromocytoma
c. hyperthyroidism
d. diabetes mellitus

37) What is the likelihood that a man with cavernous arterial peak systolic velocity of ≥ 40 cm/sec presents with arteriogenic ED?

a. never
b. unlikely
c. likely
d. always

38) Fill the space, "men with ED are 45% more likely than controls to suffer from a cardiac event within (…) of ED diagnosis".

a. 3 months
b. 5 months
c. 3 years
d. 5 years

39) What is the *absolute* contraindication for using PDE-5 inhibitors?

a. uncontrolled hypertension
b. concomitant use of nitrate
c. uncontrolled coagulopathy
d. concomitant use of intracavernosal vasodilators

40) Which of the following conditions is associated with high-flow priapism?

a. sickle cell disease
b. falling astride on a ladder
c. the presence of metastasizing tumor thrombus
d. using pharmacologic erection therapy

41) Which of the following is NOT associated with low-flow priapism?

a. chronic hemolysis
b. vascular occlusion
c. coital trauma to the penis
d. tissue ischemia

42) What is the commonest cause of priapism in men over 50?

a. sickle cell disease
b. falling astride on a ladder
c. metastasizing tumor thrombus
d. pharmacologic erection therapy

43) Which of the following mechanisms best explain the development of high-flow priapism?

a. traumatic force could result in a laceration of the cavernous artery within the corpora cavernosa
b. penile injury, especially penetrating, could result in an iatrogenic arterial-venous shunt
c. traumatic injury to emissary veins by the needle of intracavernosal pharmacotherapy could impair the cavernosal outflow
d. blunt trauma to the penis could ruin the sinusoidal ability to contract

44) What is false concerning low-flow priapism?

a. there is decreased or absent cavernosal artery inflow
b. aspirated cavernosal blood is dark, anoxic, acidotic, and hypercarbic
c. penile arteriography helps differentiate low from high-flow type
d. pain is related to soft tissue ischemia

45) What is the duration of an ischemic episode of priapism, after which spontaneous erection has NOT been reported?

a. 6 hrs.
b. 12 hrs.

c. 24 hrs.
d. 36 hrs.

46) Which surgical procedure is indicated to treat low-flow priapism?

a. angio-embolization
b. percutaneous distal penile shunt
c. arterial revascularization
d. surgical ligation

47) What is false concerning priapism?

a. low-flow type causes harder erection than high-flow does
b. the majority of low-flow type is of unknown etiology
c. high-flow type causes no pain
d. stuttering priapism is recurrent painful erections that occurs usually with sickle cell disease

48) What is true concerning high-flow priapism?

a. blood aspirate is dark red
b. treated by selective embolization of the feeding artery
c. corporal blood gas shows pH < 7.25, PO_2 < 30, PCO_2 > 60
d. 60% of cases are idiopathic

49) What is false concerning stuttering priapism?

a. erection resolution could occur spontaneously or after aspiration and phenylephrine injection
b. commoner in sicklers
c. treatment entails monthly injection of LH-RH antagonist
d. could respond to self-administered intracorporal injection of sympathomimetic amine

50) What is false regarding priapism treatment?

a. sicklers presenting with ischemic priapism can be treated by packed RBC transfusion or exchange transfusion
b. an emergency measure, using tru-cut needle to create a glans-cavernous shunt helps relieve painful erection
c. emergency management of painful, hard priapism is intracorporal injection of phenylephrine in a dose of 3-5 ml of (1 ml of 10 mg in 100 of saline), exchange and repeat every 10 min
d. cavernosa-saphenous end-to-side anastomosis adequately treats stuttering type

51) All of the following statements about priapism are true, EXCEPT:

a. high-flow and stuttering priapism are the result of nitrous oxide imbalance
b. spontaneous resolution of high-flow priapism occurs in ⅔ of cases
c. ischemic priapism, aspiration alone will be curative in ⅓ of cases
d. phenylephrine, 200 μg/mL given in 0.5-mL aliquots, not exceeding a total dose of 1 mg, is used to treat ischemic priapism

52) Which of the following neurotransmitters has a facilitatory role in the seminal

ejaculation process?

a. GABA
b. dopamine
c. serotonin
d. acetylcholine

53) What is false concerning seminal ejaculation?

a. involves pulsatile contractions of the bulbocavernosus and pelvic floor muscles
b. involves relaxation of the internal urinary sphincter
c. mediated by sympathetic spinal cord reflexes and somatic nerves S_2 - S_4
d. has a restricted voluntary control

54) What is false concerning seminal emission?

a. involves expulsion of the seminal fluid into the posterior urethra
b. involves contractions of seminal vesicles and the prostate
c. mediated by androgens and sympathetic nerves T_{10} - L_2
d. followed by the feeling of tension relief

55) All of the following etiologies explain the occurrence of life-long premature ejaculation, EXCEPT:

a. hyposensitivity of the 5-HT_2C and/or hypersensitivity of the 5-HT_1A receptor
b. hyperthyroidism and practicing masturbation in profusion
c. nonspecific neurobiologic and genetic variations
d. undefined psychological and environmental factors

56) Which of the following does NOT cause delayed ejaculation?

a. hyperthyroidism
b. psychological factors
c. degeneration of penile afferent nerves
d. treatment with SSRIs

57) What could NOT cause retrograde ejaculation?

a. treatment with pseudoephedrine
b. treatment with tamsulosin
c. TUIP
d. long standing DM

58) What is false concerning premature ejaculation (PE)?

a. delayed ejaculation commonly alternates with PE
b. treatment includes topical anesthetics, SSRI, and tramadol
c. the acquired type could be due to prostatitis or hyperthyroidism
d. the prevalence is 4 - 40% in men`s population

59) How common is the association between psychological disturbances and ejaculation disorders?

a. uncommon
b. not uncommon

c. common
d. exceedingly common

60) Positioning the penis upright after malleable prosthesis implantation surgery helps:

a. reduce the risk of infection
b. lessen edema and pain
c. expedite wound healing
d. avoid sutures disruption

61) What is the preferred space for placing the reservoir of inflatable penile prosthesis?

a. the scrotum
b. the retropubic space
c. the suprapubic space
d. caudal to the umbilicus

62) What is the treatment of infected inflatable penile prosthesis?

a. high dose, culture-based iv antibiotic
b. removing the infected part
c. removing all prosthetic parts
d. exchanging the infected part

63) How to manage the failure of one cylinder of inflatable penile prosthesis?

a. changing the failed cylinder
b. removing the failed cylinder
c. removing the entire prosthetic parts
d. reassurance

64) Which ED medication acts on both D_1 and D_2-like receptors?

a. alprostadil, urethral suppository
b. apomorphine, sublingual
c. sildenafil, swallowable
d. papaverine intracorporal injection

65) The mature plaque in Peyronie disease stems from:

a. the corpora cavernosa
b. Buck`s fascia
c. the tunica albuginea
d. the corpus spongiosum

66) How common could Peyronie disease lead to emotional distress?

a. uncommon
b. not uncommon
c. common
d. exceedingly common

67) What is false concerning penile calcification in Peyronie disease (PD)?

a. an indicative of a stable, mature disease
b. does not indicate the need for surgery

c. tunica albuginea calcifications are difficult to identify on MRI
d. around 35% of PD patients will have plaque calcification

68) What is false concerning Peyronie disease?

a. affects men aged 40-70 yrs.
b. the initial inflammatory response of the tunica albuginea is chronic lymphocytic with plasma cell infiltration
c. the natural history is to progress to fibrous, calcified plaque with penile angulation. Spontaneous resolution is uncommon
d. intralesional injection of verapamil helps improve pain, impotence, but not the curvature

69) Which of the following is NOT a risk factor for Peyronie disease?

a. obesity
b. smoking
c. hypertension
d. diabetes mellitus

70) What is an *absolute* contraindication to performing a graft procedure for a Peyronie disease patient with calcified plaque?

a. curvature > 70 degrees
b. weak erection
c. unstable penis with an indentation or hinge effect
d. short penis

71) Which of the listed Peyronie disease medications has the property of being a nonspecific phosphodiesterase inhibitor with combined anti-inflammatory and antifibrogenic actions?

a. PABA
b. colchicine
c. pentoxifylline
d. vitamin E

72) All of the following treatment modalities have been tried to treat Peyronie disease, EXCEPT:

a. extracorporeal shockwave therapy
b. external vacuum
c. low-dose chemotherapy
d. electromotive administration

73) All of the following conditions have associations with Peyronie disease, EXCEPT:

a. vitamin E deficiency
b. ingestion of calcium channel-blocking agents
c. elevations of serotonin levels
d. Dupuytren contractures

74) Regarding female sexual health, which statement is false?

a. similar to males, female sexual health requires physical, emotional, and mental well-being

b. urinary incontinence has a negative impact on sexual arousal
c. estrogen, progesterone, and testosterone levels decline sharply after menopause
d. hormonal contraception decreases bioavailable testosterone

75) Which statement is false concerning erectile dysfunction?

a. the cardiovascular risk of sexual activity can be estimated from patient`s level of exercise tolerance
b. lifestyle modifications like regular exercising and optimizing body fitness can improve erectile function
c. has been found in 15 - 25% of men post radical prostatectomy
d. shares common risk factors with ischemic heart disease

76) What is false concerning avanafil?

a. administered around 15 - 30 minutes before sexual activity
b. its dosage is adapted according to efficacy and tolerability
c. its efficacy has been shown in difficult-to-treat cases like diabetics
d. can be taken with or without food

77) What is true regarding the half-life of PDE5Is?

a. for sildenafil and vardenafil is about 4 hours
b. for tadalafil is 17 – 36 hours
c. for avanafil is 6 – 17 hours
d. all of the above

78) Which of the following PDE5Is can be taken safely with organic nitrate?

a. vardenafil
b. tadalafil
c. avanafil
d. none of the above

79) What is false concerning PDE5Is non-respondents?

a. most commonly due to waiting too long after taking the medication, before attempting sex
b. could be a result of incorrect drug dosing
c. using PDE5Is without sexual stimulation leads to “no-response”
d. the management of non-respondents relies largely on the underlying cause

80) All of the following are intracavernosal injection therapy for ED, EXCEPT:

a. alprostadil
b. phenylephrine
c. phentolamine
d. papaverine

81) Which of the following impair(s) erectile function least?

a. the anti-triglyceride fenofibrate
b. the antipsychotic risperidone
c. testosterone and anabolic steroids
d. the anti-diabetes metformin

82) Studying an ED case includes the following, EXCEPT:

a. intracorporal injection of prostaglandin E_1
b. intracorporal aspiration for analysis
c. biothesiometry
d. nocturnal penile tumescence (rigidity scanner)

83) What is the least blood test recommended to investigate a 52 yrs. obese man who has diabetes type II and complains of erectile dysfunction?

a. cholesterol
b. TSH
c. Hb A_1C
d. testosterone

84) The proposed mechanism for treating ED patients with penile low-intensity shock wave therapy is:

a. neovascularization
b. accelerating blood inflow
c. breaking down atheromatous plaques
d. anti-fibrosis

85) What is the single most commonly used agent for intracavernosal injection to treat ED?

a. verapamil
b. papaverine
c. alprostadil
d. phentolamine

86) The most common drawback of intraurethral prostaglandin E_1 pellets is:

a. pellet expulsion
b. pellet migration
c. prolonged erection
d. urethral burning

87) Nocturnal erections are explained as a result of:

a. sexual fantasy during sleep
b. reflex response to a full bladder
c. the physiology of rapid eye movement phase of sleep
d. uninhibited reflexes triggered by tactile stimuli to the penis by the underwear

88) Erection in spinal cord injury patients is explained as:

a. reflexogenic erection activated by tactile stimuli to the genital area mediated through a reflex arc at S_2 to S_4 levels
b. psychogenic erections are activated by neural impulses originating from the external genitalia and mediated by spinal cord neural centre located at T_{11} to L_2 levels
c. primarily a vascular phenomenon, activated by neurologic signals from anywhere below the injury level and expedited in the appropriate hormonal milieu and erotic atmosphere

d. basically a hormonal response triggered by visual sexual stimuli in the presence of adequate serum testosterone along with enhanced libido and fantastic mindset

89) What is the most common form of sexual dysfunction in women?

a. sexual interest/arousal disorder
b. orgasmic disorder
c. genito-pelvic pain/penetration disorder
d. substance/medication-induced sexual dysfunction

90) What is false concerning hyper-sexuality?

a. might be a side effect of Parkinson's disease medications
b. could be a type of obsessive compulsive disorder
c. could result from biochemical changes accompanying dementia
d. divided into satyriasis for females and nymphomania for males

91) What is the commonest manifestation of metastatic tumor spread to the penis?

a. penile swelling (eggplant sign)
b. discrete penile shaft nodules
c. penile pain of unknown origin
d. low-flow or stuttering priapism

ANSWERS TO SEXUAL DYSFUNCTIONS

1-b testosterone has been studied as a male contraceptive, and is not suitable for fertility enhancement. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

2-c older men have little diurnal variation in serum testosterone. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

3-a increase in fat-free mass and decrease in fat mass. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

4-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

5-c Insulin resistance and type 2 diabetes mellitus. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

6-b delayed epiphyseal closure results in tall body stature. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

7-c the diagnosis of late-onset male hypogonadism is based on signs and symptoms of androgen deficiency, along with consistently low serum testosterone levels. Proper diagnosis justifies testosterone treatment. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

8-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

9-c erythropoiesis may become evident at 3 months and peaks at 12 months. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

10-d all of the aforementioned conditions, in addition to BPH are related to metabolic syndrome. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

11-a liposarcoma has no proven relation to obesity. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

12-a a growing body of evidence supports the relation between obesity and infertility in obese males. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

13-b despite that kidneys don't metabolize serum testosterone, the catabolic products are excreted in the urine. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

14-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

15-a the only absolute contraindication is the pre-existing breast or prostate cancer of any type. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

16-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

17-c the ventral side between the 5 and 7 o'clock positions, where the longitudinal outer layer is absent. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

18-c stretching of the tunica to its full capacity blocks the emissary veins and decreases venous outflow. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

19-c NO released from eNOS contributes to the maintenance of erection. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

20-a a period of smooth muscle relaxation after prolonged contraction. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

21-b primary psychological ED is commonly related to anxiety. Adult and Pediatric Urology, fourth edition, by

Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

22-c venous leak is evident because the emissary veins are open. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

23-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

24-b the sympathetic flow causes detumescence by leasing norepinephrine.

25-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

26-b self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

27-a about half of CRF patients have a bothering ED. However, after transplantation about half of them continue to have ED. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

28-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

29-d testosterone has little if any to do with visually erotic stimuli. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

30-c penile fracture carries no additional risk factor for ED. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

31-d organic ED, especially arteriogenic responds dramatically to PDE inhibitors. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

32-b a sum of 1-7 indicates severe ED. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

33-c patients with penile implants are not meant with the questionnaires. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

34-a angiography is essential to, anatomically, plan the operation. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

35-d arteriogenic ED is a good indication for intracavernosal pharmacotherapy. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

36-b self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

37-a cavernous arterial peak systolic velocity > 35 cm/sec indicates normal cavernous arterial inflow and refutes the diagnosis of arteriogenic ED. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

38-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

39-b using nitrate in any form is an absolute contraindication when used concomitantly with PDE-5 inhibitors. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

40-b straddle injury is a typical mechanism for non-ischemic priapism. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

41-c penile trauma could cause high-flow priapism. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

42-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

43-a traumatic forces applied on the penis may be blunt or penetrating, resulting in laceration of the cavernous artery or one of its branches within the corpora. Adult and Pediatric Urology, fourth edition, by Jay Y.

Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

44-c penile arteriography is not used to differentiate low from high-flow priapism. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

45-d no patient reported spontaneous erection after priapism duration of more than 36 hours. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

46-b distal cavernoglanular shunt. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

47-c ischemic type causes harder and more painful erections. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

48-b selective embolization after arteriography to pinpoint the feeder artery. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

49-c treatment entails monthly injection of LH-RH agonist. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

50-d cavernosa-saphenous end-to-side anastomosis treats high-flow type. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

51-a low-flow and stuttering priapisms are the result of NO imbalance. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

52-b dopamine promotes ejaculation, while serotonin inhibits it. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

53-b the bladder neck is typically closed while ejaculation. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

54-d ejaculation, but not emission, is followed by the feeling of tension relief. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

55-b masturbation is not linked to PE. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

56-a hypothyroidism could cause DE. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

57-a sympathomimetic amine agents like pseudoephedrine, ephedrine, midodrine, and phenylpropanolamine close the bladder neck and thus stop retrograde ejaculation if there were. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

58-a ED commonly accompanies PE. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

59-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

60-b resolve edema and pain by the gravity effect. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

61-b to avoid autoinflation. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

62-c infection in one part undoubtfully spreads to all. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

63-d reassurance; as many patients can enjoy coitus with only one functioning cylinder. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

64-b apomorphine acts centrally on D_1, D_2 receptors. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

65-c from the tunica albuginea surrounding the corpora cavernosa. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

66-d emotional distress in PD occurs in up to 94% of cases and is related to penile shortening and painful intromission. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

67-a in contrast to the old belief, calcifications in PD doesn't indicate a mature stable plaque. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

68-d approximately, 42% of PD patients enjoy an improvement in curvature on using verapamil. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

69-c HTN hasn`t been reported to be a risk factor for PD. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

70-b self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

71-c self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

72-c low-dose radiation therapy has been used. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

73-b PD has been associated with using beta-blockers. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

74-c estrogen and progesterone levels decline sharply after menopause, whereas testosterone declines gradually. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

75-c ED has been found in 25-75% of men post radical prostatectomy. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

76-c the description, typically, fits vardenafil. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

77-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

78-d nitrates are contraindicated with PDE5Is. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

79-a waiting too long after taking the medication, before attempting sex is not the most common cause. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

80-b phenylephrine counteracts erection. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

81-d biguanide group, which metformin belongs to, has not been reported to cause ED. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

82-b intracorporal aspiration doesn't help diagnose ED cases. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

83-b TSH is not indicated in this patient. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

84-a promotes revascularization and angiogenesis in the penis. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

85-c self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

86-d urethral burning occurs in < 10% of patients. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

87-c self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

88-a self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

89-a female hypo-sexual derive is the commonest among listed causes. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

90-d divided into satyriasis for males and nymphomania for females. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

91-d the most common origins of penile metastasis are the bladder, prostate, and rectum. They commonly present as priapism. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

MALE REPRODUCTION AND INFERTILITY

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **The testicular interstitium contains all of the following cells, EXCEPT:**
   a. Leydig cells
   b. Sertoli cells
   c. mast cells
   d. macrophages

2) **Both ends of the seminiferous tubules end in the:**
   a. rete testis
   b. straight tubules
   c. efferent ductules
   d. epididymis

3) **The blood-testis barrier is constructed of the following cell types:**
   a. Sertoli - Sertoli cells
   b. myoid - Leydig cells
   c. spermatogonia - endothelial cells
   d. spermatogonia - Leydig cells

4) **What is false concerning the function of the epididymis:**
   a. thermally and hormonally dependent
   b. entails sperm transportation, storage, and motility maturation
   c. motility maturation is achieved at late caput or early corpus
   d. neutral α- glucosidase activity is an indicator of epididymal function

5) **Testosterone peaks at the following intervals of male`s life, EXCEPT:**
   a. early gestation
   b. late gestation
   c. 2 months after delivery
   d. puberty

6) **What is false concerning chemotherapy-related infertility?**
   a. DNA damage can be detected up to 2 years following chemotherapy
   b. is toxic to actively dividing cells especially up to the preleptotene stage
   c. treatment for Hodgkin disease leads to infertility in > 80% of patients
   d. the agents mostly associated with infertility are the anthracyclines such as doxorubicin

7) **What is false concerning semen analysis for infertility cases?**
   a. should be provided after at least 3 to 4 days of abstinence
   b. should be processed within 1 hour of ejaculation
   c. should be provided in 2 to 3 samples, at a minimum of 2 to 3 days apart
   d. fertility boosters must be withheld 90 days before analysis

8) **What is false concerning seminal volume in fertility issues?**
   a. per the WHO- 2010 criteria, the lower reference limit is 1.5 mL
   b. low volume could be due to an improper collection or retrograde ejaculation

c. high volume could be due to hypergonadotropism and after relieving ductal obstruction
d. each day of abstinence is associated with an increase in semen volume of 0.4 mL, up to 7 days

9) What is false concerning seminal density in fertility issues?

a. per the WHO- 2010 criterion for density, the lower reference limit is 15 million sperm per mL, or > 50-60 million total sperm
b. each day of abstinence is associated with an increase in sperm density by 10-15 million sperm/mL, up to 7 days
c. oligospermia could be due to improper collection or retrograde ejaculation
d. severe oligospermia is when sperms count is < 5 million/mL

10) What is false concerning sperm motility in fertility issues?

a. as per the WHO- 2010 criterion for normal motility, the lower reference limit is 40%
b. in sperm motility testing, grade 3 is movement in a straight line
c. abnormal motility could be due to sperm ultra-structural abnormalities or partial ductal obstruction
d. motility is basically an acrosomal function

11) What is false concerning sperm morphology in fertility issues?

a. per the WHO- 2010 criterion for normal morphology, the lower reference limit is 4%
b. per Kruger strict criteria, any shortage in the sperm's density or motion is enough to consider the semen abnormal
c. stress pattern of abnormal semen includes teratospermia
d. teratospermia could be due to smoking, varicocele, or endocrinopathy

12) What is the lower radiation dose that could render the subject infertile when his testes are exposed to?

a. 7.5 Gy
b. 11.5 Gy
c. 15.5 Gy
d. 19.5 Gy

13) Scrotal temperature is physiologically lower than body temperature by:

a. 0^{o} to 0.5^{o} C
b. 1^{o} to 2^{o} C
c. 2^{o} to 4^{o} C
d. 4^{o} to 6^{o} C

14) Which of the following conditions could cause brownish semen?

a. using doxorubicin chemotherapy
b. spinal cord injury
c. the first few ejaculates after relieving ductal obstruction
d. fungal UTI

15) What is the lower limit of testicular diameter under which impaired spermatogenesis is expected?

a. 3.1 cm
b. 3.6 cm
c. 4.1 cm
d. 4.6 cm

16) What is false in obesity-related infertility?

a. BMI increases, SHBG, estrogen and testosterone decrease
b. the odds of infertility increase by 10% for every 9 kg (20 pounds) a man is overweight
c. sleep fragmentation has been proposed as the mechanism by which sleep apnea disrupts nocturnal testosterone rhythm resulting in hypotestosteronemia
d. men reporting symptoms of ED, increased weight is found in 80% of subjects

17) What is false concerning obstructive azoospermia (OA)?

a. defined as the absence of spermatozoa and spermatogenetic cells in semen and post-ejaculate urine due to obstruction
b. the most common cause of acquired OA is vasal obstruction
c. congenital forms of epididymal obstruction include chronic Young's syndrome
d. cystic obstructions of ejaculatory ducts are usually congenital and are typically paramedian

18) What is true regarding obstructive azoospermia (OA)?

a. usually seminal vesicles are dilated when A-P diameter is > 7 mm
b. functional obstruction of the distal seminal ducts might be attributed to local neuropathy or using SSRI medications
c. non-OA is less common than OA occurring in 20% of men with azoospermia
d. post-inflammatory obstructions causing OA are most commonly due to chlamydial epididymitis

19) Which of the following clinical findings has NO relation to male infertility?

a. the volume of left testis is 18 ml, while the right is 20 ml
b. enlarged and hardened epididymis
c. absent, nodular or beaded vas
d. palpable seminal vesicle per rectum

20) What is false concerning sperm DNA fragmentation?

a. associated with high chances of miscarriages
b. DNA fragmentation index of ≥ 2% seriously reduces the success rates after ICSI
c. detected by the sperm chromatin dispersion test and TUNEL assay
d. commonly caused by diabetes mellitus

21) What is false concerning testicular biopsy for fertility issues?

a. should be combined with extraction of testicular sperms for fertilization and/or cryopreservation
b. selected cases of azoospermia, it is indicated to exclude obstruction
c. the technique of choice in obstructive azoospermia is TESE
d. spermatogenic pockets may be patchy, thereby, biopsies might miss areas of sperm

population

22) What is false concerning the role of Y-chromosome microdeletions in male infertility?

a. AZF-c deletions are the most common
b. deletions are rare with a sperm concentration > 5 million/mL
c. removal of the AZF-b region is associated with Sertoli-cell-only syndrome
d. total AZF deletions do not impose a risk for cryptorchidism or testicular cancer

23) The highest recurrence rate after testicular varicocele repair has been reported post:

a. laparoscopic repair
b. high ligation
c. retrograde embolization
d. inguinal approach

24) What is false concerning male contraception?

a. a combination of progesterone with LH-RH antagonists result in complete suppression of spermatogenesis
b. prevent early recanalization after vasectomy, cauterization and fascial interposition are advised
c. the shorter the interval is from vasectomy to reversal, the higher the pregnancy rate will be
d. periodic abstinence has a failure rate of 20%

25) What is false concerning treating male infertility?

a. clomiphene citrate and tamoxifen have been widely used in idiopathic oligoasthenoteratospermia
b. hormonal replacement therapy in male infertility has been approved for hypogonadotropic hypogonadism cases
c. is recommended to use testosterone supplement for treating unexplained male infertility
d. is advised to operate on men with a clinical varicocele, oligospermia and/or unexplained infertility

26) Which of the following modalities of testicular varicocele repair could be complicated by right shoulder pain?

a. antegrade sclerotherapy
b. retrograde embolization
c. microsurgical inguinal or subinguinal with delivery of the testis
d. laparoscopy

27) During vasectomy reversal, the absence of spermatozoa in vas deferens fluid suggests the presence of:

a. secondary epididymal obstruction
b. distal vas deferens obstruction
c. ejaculatory duct obstruction
d. primary testicular failure

28) A 24 yrs. man complains of secondary infertility. Physical examination reveals enlarged

bilateral epididymi. Repeated semen analyses show azoospermia with positive fructose, volumes of 2.5, 1.9 and 2.7 mL, and no sperms identified in the post-ejaculation urinalysis. FSH is 3.2 IU/L. Semen α-glucosidase is 8.1 mU ml^{-1}. Transrectal ultrasound reveals seminal vesicles of 0.8 and 1.3 cm in largest diameters, with no midline cyst. The procedure of choice is:

a. TESE/ICSI
b. PESA/IVF
c. IUI
d. none of the above, just reassurance

29) **A 32 yrs. diabetic man has secondary infertility. Physical examination is normal. Repeated semen analyses show azoospermia with positive fructose and volumes of 0.5, 1.0 and 0.7 mL. Post-ejaculation urinalysis shows sperms in abundance. FSH is 7.8 IU/L. The procedure of choice is:**

a. TESE/ICSI
b. PESA/IVF
c. IUI
d. none of the above, just reassurance

30) **A 20 yrs. man has secondary infertility. Physical examination is normal. Repeated semen analyses show azoospermia with negative fructose and volumes of 0.5, 1.0 and 0.7 mL. No sperms are identified in the post-ejaculation urinalysis. FSH is 7.8 IU/L. Semen α-glucosidase is 9.6 mU ml^{-1}. Transrectal ultrasound reveals seminal vesicles of 2.8 and 1.9 cm in largest diameters with no midline cyst. The procedure of choice is:**

a. TESE/ICSI
b. TURED
c. IUI
d. none of the above, just reassurance

31) **What is the likelihood that an infertile man with FSH ≤ 7.6 IU/L and the testis long axis is > 4.6 cm, has an obstruction?**

a. never
b. unlikely
c. likely
d. always

32) **What is the threshold of sperm concentration above which intrauterine insemination success is favorable?**

a. 31.0 million/mL
b. 37.0 million/mL
c. 42.0 million/mL
d. 48.0 million/mL

33) **Under light microscopy, leukocytes and immature germ cells in a semen sample look similar. What additional test is required to distinguish between the two types of cells?**

a. Papanicolaou stain
b. TUNEL assay
c. sperm chromatin configuration test
d. indicator

34) Male infertility associated with androgen receptor insensitivity is characterized by:

a. high testosterone, high estradiol
b. low testosterone, low estradiol
c. high testosterone, low estradiol
d. low testosterone, high estradiol

35) Patients with bilateral absence of the vas should be evaluated for:

a. Klinefelter syndrome
b. cystic fibrosis gene mutation
c. supernumerary X chromosome
d. partial AZF-a region deletion

36) In the domain of male infertility, what is true concerning post coital test?

a. abnormal in 10% of infertile couples
b. indicated in semen hyperviscosity and unexplained infertility
c. a normal result, sperm function tests should be considered
d. all of the above

37) All of the following causes of male infertility can be treated by medical means, EXCEPT:

a. Klinefelter syndrome
b. endocrinopathy
c. antisperm antibodies
d. retrograde ejaculation

38) What is false concerning gonadotropin-releasing hormone (GnRH)?

a. secreted by the hypothalamus
b. released in a pulsatile manner around every 70-90 minutes
c. secretion is stimulated by melatonin from the pineal gland and inhibited by testosterone
d. the half-life is 20-50 minutes

39) What is false concerning spermatocytes?

a. primary spermatocytes pass through the preleptotene, leptotene, zygotene, and pachytene stages to become secondary spermatocytes
b. during meiosis cells cross from the basal to the adluminal compartments
c. secondary spermatocytes undergo a reduction division (mitosis) to become spermatids
d. secondary spermatocytes contain small nuclei with fine chromatin

40) Which process of germ cell development involves the formation of the acrosome and flagella?

a. first meiosis
b. second meiosis
c. spermiogenesis

d. mitosis

41) A 36 yrs. man having Klinefelter syndrome underwent unsuccessful TESE/ICSI. Which of the following treatment options is NOT reasonable to consider?

a. additional ICSI
b. IUI
c. adoption
d. donated sperms

42) Which of the following coital lubricants is NOT spermicidal?

a. vegetable oil
b. surgilube
c. K-Y jelly
d. Saliva

43) What is true regarding the effects of the following drugs on fertility potentials?

a. cyproterone, cimetidine and ketoconazole have antiandrogen properties
b. sulfasalazine and doxorubicin decrease testosterone levels by 42%
c. nitrofurantoin and tetracycline depress spermatogenesis
d. spironolactone results in irreversible oligoasthenospermia

44) Sertoli-cell-only syndrome is characterized by all of the following, EXCEPT:

a. small to normal-sized testes and azoospermia
b. normal LH, low testosterone, high FSH
c. normal secondary sex characteristics
d. histology reveals normal Sertoli and Leydig cells

45) What is the commonest cause of acquired testicular failure in adults?

a. infections
b. trauma
c. radiation exposure
d. drug induced

46) All of the following viruses could cause orchitis, EXCEPT?

a. mumps virus
b. echovirus
c. retrovirus
d. group B arbovirus

47) All of the following are true regarding "vanishing testes syndrome", EXCEPT:

a. patients have normal male karyotype 46 XY and normal SRY gene
b. cryopreservation is advised for future ART
c. causes might be related to infection, vascular disease or torsion
d. affected individuals cannot have biological children

48) In an infertile man, a testicular biopsy that shows normal Sertoli cells and Leydig cells, normal-sized seminiferous tubules, and normal tunica propria points to the following condition:

a. Sertoli-cell-only syndrome
b. maturation arrest
c. hypospermatogenesis
d. cryptorchid testes

49) On working up a case of infertility, testicular biopsy shows decreased number of spermatogonia, germ cell hypoplasia, Sertoli cell atrophy, tubular hyalinization, hyperplastic Leydig cells, and deformed tubules. What would be the proper diagnosis?

a. cryptorchid testes
b. Klinefelter syndrome
c. post-testicular obstruction
d. immunogenic infertility

50) What is false concerning immunogenic male infertility?

a. patients with antisperm antibody > 1:32 might respond to immunosuppression cyclic steroids
b. the emergence of antisperm antibodies after vasectomy is uncommon
c. the presence of antisperm antibodies might appear as abnormal clumping, agglutination or an abnormal postcoital test result
d. radioimmunoassay and immunobead test help detect antisperm antibodies

51) Which statement is false regarding male infertility in spinal cord injury patients?

a. analysis might reveal disruptions in nuclear maturity and DNA composition of spermatozoa with neutrophil infiltration
b. the main issue is anejaculation that can be managed by electroejaculation or sperm retrieval techniques
c. sperm aspirated from the vas deferens are of better quality if compared to ejaculated sperms
d. treated by immunosuppression using cyclic steroids for 6 months

ANSWERS TO MALE REPRODUCTION AND INFERTILITY

1-b Sertoli cells lie within seminiferous tubules. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

2-a self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

3-a Sertoli - Sertoli cells tight junctions are the strongest cell to cell integration in the body. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

4-c motility maturation is achieved at late corpus or early cauda. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

5-b no peak at late gestation. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

6-d the agents mostly associated with infertility are the alkylating agents such as cyclophosphamide. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

7-d withholding fertility boosters is not a prerequisite for seminal analysis. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

8-c high volume could be due to contamination by urine or periurethral secretions. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

9-c low seminal volume could be due to an improper collection or retrograde ejaculation. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

10-d motility is basically flagellar function. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

11-b as per Kruger strict criteria, any minor defect in sperms 'shapes and morphology render them abnormal. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

12-a self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

13-c in contrast to ovaries located inside the body, testes function in $2C^{o}$ to $4C^{o}$ degrees below core body temperature. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

14-b self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

15-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

16-a in obese men, estrogen increases due to peripheral conversion. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

17-d cystic obstructions are usually congenital like Mullerian duct and are typically midline. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

18-b self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

19-a a testis of $\geq$ 16 ml functions normally. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

20-b DNA fragmentation index of 20% or more significantly reduces the success rates after ICSI. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

21-c in non-OA the technique of choice is TESE. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

22-c complete removal of the AZF-b region is associated with spermatogenic rest. Adult and Pediatric

Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

23-b recurrence/persistence rate after high ligation is up to 29%. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

24-a a combination of testosterone with progestin results in complete suppression of spermatogenesis. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

25-c it is recommended not to use testosterone supplement for treating male infertility. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

26-d post-operative pain in the right shoulder could be due to diaphragmatic stretching during pneumoperitoneum. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

27-a self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

28-b the description fits OA at the epididymo-vasal level. Therefore, PESA/IVF is firstly indicated. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

29-c ideally, IUI is for retrograde ejaculators. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

30-b the description fits OA at the ejaculatory duct level. Therefore, TURED is indicated. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

31-d the probability of obstruction in this case is 96%. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

32-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

33-a self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

34-a self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

35-b self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

36-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

37-a Klinefelter patients require TESE which is a surgical operation. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

38-d t½ is 2-5 minutes. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

39-c secondary spermatocytes undergo a second round of meiosis to become spermatids. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

40-c spermatids undergo spermiogenesis to form Sb1, Sb2, Sc, Sd1, and Sd2 sperms with flagella and acrosomes. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

41-b IUI is out of choice at this stage. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

42-a vegetable oils have demonstrated no spermicidal effect. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

43-a self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

44-b normal LH and testosterone, high FSH. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

45-a the most common cause of acquired testicular failure in adults is viral orchitis, followed by trauma. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

46-c self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

47-b the condition is congenital and no room for cryopreservation. The only left options are using donated sperms and adoption. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

48-b self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

49-b self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

50-b after vasectomy, approximately, 60% of patients will have evidence of antisperm antibodies. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

51-d immunosuppression therapy is indicated in immunogenic infertility. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

UPPER URINARY TRACT TRAUMA

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **As per the AAST kidney injury scale, to which grade does a parenchymal laceration extending through renal cortex, medulla, and collecting system belong to?**
   a. II
   b. III
   c. IV
   d. V

2) **As per the AAST kidney injury scale, to which grade does a contusion injury causing hematuria with normal radiologic studies belong to?**
   a. 0
   b. I
   c. II
   d. III

3) **Indications for emergency exploration of renal trauma patients include all of the following, EXCEPT:**
   a. hemodynamic instability
   b. expanding hematomas
   c. the possibility of high-grade renal injury
   d. stable patients with penetrating trauma

4) **What is false concerning renal trauma?**
   a. the degree of hematuria corresponds well to the stage of injury
   b. blunt traumas are commoner than sharp injuries
   c. delayed contrast CT images, extravasated urine can be distinguished from blood
   d. ultrasonography cannot identify vascular pedicle injuries or segmental infarcts

5) **What statement is false concerning renal traumas caused by a major deceleration injury?**
   a. children are more prone to this mechanism of injury
   b. could result from a motor vehicle accident or a fall from a height
   c. might cause a tear of renal artery intima that results in vessel occlusion
   d. such injuries, typically, result in severe subcapsular, nonexpanding hematoma without parenchymal laceration

6) **What is false concerning renal trauma in pediatric patients?**
   a. anatomy, children are more prone to renal traumas
   b. contrast to children, adults can maintain a normal blood pressure in spite of extensive blood loss
   c. contrast CT is the best study for staging a solid organ injury
   d. brisk flexion-extension motion might avulse the ureteropelvic junction

7) **What is false regarding renal traumas?**
   a. renal parenchymal injury patients with urinary extravasation should be explored albeit

they show stable hemodynamics

b. hemodynamically unstable patients with no response to resuscitation must undergo an immediate intervention

c. after abdominal contrast CT for evaluating blunt abdominal trauma, delayed images should be taken if a renal injury was suspected

d. blunt injuries tend to track between the segmental vessels, while sharp injuries sever them

8) Among all trauma cases, renal traumas constitute about:

a. 0.2 – 1 %

b. 1 – 5 %

c. 6 – 9 %

d. 10 – 12 %

9) What is false concerning blood loss in renal traumas?

a. haematuria that is out of proportion to the history of trauma might suggest a pre-existing pathology

b. urine dipstick is not reliable to evaluate hematuria as it has high false negatives

c. hemodynamically stable patients, serial haematocrit testing is part of the close monitoring

d. all of the above

10) What is false concerning renal imaging in trauma cases?

a. nuclear scintigraphy is recommended in 3 months post renal trauma for follow up

b. the diagnostic accuracy of MRI is not superior to CT for renal traumas

c. contrast enhanced ultrasonography (CEUS) with microbubbles helps diagnose injuries to the renal pelvis and/or ureter

d. plain KUB has a value in diagnosing renal trauma

11) What is true regarding operating on acutely traumatized kidney and ureter?

a. a renal vascular injury was suspected, surgical exploration must be performed through a midline abdominal incision

b. grade IV renal trauma, segmental artery occlusion, is an absolute indication for immediate surgical exploration

c. placing a vascular graft surrounding a traumatized ureter, overly, results in a vascular fistula

d. ureteral pelvic junction disruption is a relative indication for renal exploration through a flank incision

12) Which management plan of complicated ureteral injuries is *incorrect*?

a. when the ureteral cannot be adequately repaired, it should be ligated with placement of nephrostomy tube

b. when the uterus is removed, the uterine artery can be used to supply the devascularized lower ureter

c. complete ureteral transections should be repaired within 3 days of the injury, or delayed

for secondary repair in 6 weeks

d. multiple ureteral injuries at different levels could result in page kidney

13) What is the ideal repair of a midureteral injury caused by a sharp object?

a. ureterocutaneus diversion
b. ureteroureterostomy
c. vesico-psoas hitch and/or Boari flap
d. transureteroureterostomy

14) What is most important on performing ureteroureterostomy?

a. repair should be under magnification
b. ensure leak-proof realignment
c. using DJ ureteral stent
d. applying the wound drain under negative pressure

15) As per AAST ureteral trauma scale, to which grade does a < 2 cm complete transection with devascularisation belong to?

a. II
b. III
c. IV
d. V

16) The second most common cause of surgical ureteral injuries is:

a. obstetric & gynecologic operations
b. vascular operations
c. laparoscopic operations
d. colorectal operations

17) How common are ureteral injuries during robot-assisted prostatectomies?

a. uncommon
b. not uncommon
c. common
d. exceedingly common

18) In women, surgical injuries to the right ureter might present as any of the following, EXCEPT:

a. anuria and renal failure
b. flank pain and vaginal discharge
c. fever and sepsis
d. fistula and urinoma

19) Most surgical injuries to the ureters are:

a. detected on table
b. missed
c. diagnosed post operatively
d. avulsions

20) Which of the following is an *absolute* contraindication to transureteroureterostomy?

a. small-capacity bladder
b. short donor ureter
c. significant bladder outlet obstruction
d. urothelial tumor

21) Which of the following is NOT a contraindication to ileal ureteral substitution?

a. short ureter
b. neurogenic bladder
c. bladder outlet obstruction
d. inflammatory disease

22) What is the most sensitive radiographic study for diagnosing a ureteral injury?

a. antegrade ureterography
b. retrograde pyelography
c. contrast enhanced ultrasonography with microbubbles
d. intravenous urography

23) Partial ureteral transections due to gunshot wounds should be:

a. repaired primarily
b. resected with 2-cm margin, and the edges re-approximated
c. stented
d. observed closely

24) What is false concerning repairing lower ureteral injuries?

a. vesicopsoas hitch bridges an 8 – 12 cm defect
b. ureteroneocystostomy repairs defects up to 5 cm
c. Boari flap provides an additional 12-15 cm of length
d. the base of Boari flap should be $\geq$ 4 cm

25) Following a blunt abdominal trauma to a 34 yrs. woman, urethral catheterization drains gross hematuria. What could be the cause?

a. intravesical bladder rupture
b. extravesical bladder rupture
c. renal contusion
d. any of the above

26) What is the primary lesion in an acute renal artery thrombosis following deceleration injury?

a. avulsion of the posterior segmental artery
b. laceration of the anterior segmental artery
c. tear in the arterial intima
d. contusion of the renal pedicle

27) What is the most important criterion of the gun shot that determines the magnitude of tissue damage?

a. entry and exit sites of the bullet
b. velocity of the bullet

c. length of the track inside the body
d. firing range

28) During an emergency abdominal hysterectomy the lowest part of the left ureter is lacerated and bleeding. What would be next step?

a. place intraoperative ureteral stent
b. segmental resection and end-to-end anastomosis
c. ligate the ureter and insert post op. nephrostomy tube
d. segmental resection and ureteral re-implantation

29) During transabdominal O'Connor's operation for vesicovaginal fistula repair, which omental arteries should be saved most?

a. gastroduodenal
b. gastroepiploic
c. inferior mesenteric
d. pancreaticodeuodenal

30) On day 5 post abdominal hysterectomy, the patient starts to have a watery vaginal discharge alongside the right flank pain and fever. IVU shows hydroureteronephrosis and lower ureteral leak of the dye. What should be next step?

a. inserting a nephrostomy tube
b. simultaneous cystoscopy and vaginoscopy with fistula track fulguration
c. cystoscopy a retrograde ureteral stenting
d. exploration and primary repair

ANSWERS TO UPPER URINARY TRACT TRAUMA

1-c grade IV. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

2-b grade I. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

3-d the description fits grades I, II or III depending on the depth of penetration and the structures involved. In all aforementioned grades, emergency exploration is not indicated. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

4-a pedicle avulsion (grade V) renal injury shows no hematuria. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

5-d deceleration injuries could result in avulsion of renal hilum and devascularisation of the kidney or renal artery intimal tear. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

6-b children can maintain a normal blood pressure despite extensive blood loss. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

7-a renal parenchymal injury patients with urinary extravasation could be initially observed as they show stable hemodynamics. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

8-b self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

9-b urine dipstick is a reliable test to evaluate haematuria, with false-negative results from 3 to 10%. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

10-c bubbles cannot be excreted in the urine. Thus, it cannot help detect ureter and renal pelvis injuries. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

11-a midline approach ensures direct pedicle control. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

12-d page kidney results from a compressing hematoma to the renal parenchyma ending in hypertension and renal tissue loss. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

13-b self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

14-c stented repair is the most important among other important principles. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

15-c self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

16-d colorectal surgeries come next after gynecologic procedures. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

17-a in a series of 6442 patients, ureteral injuries occurred in 3 only. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

18-a one-ureter obstruction is unlikely to cause anuria and renal failure. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

19-c 70 - 80% of surgical injuries are diagnosed postoperatively. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

20-b a short donor ureter or a diseased recipient ureter are the absolute contraindications. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

21-a short ureter is an indication to ileal ureteral substitution. Adult and Pediatric Urology, fourth edition, by Jay

Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

22-b among the listed options, RGP is the most sensitive. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

23-b self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

24-a vesicopsoas hitch bridges a 6 – 8 cm defect. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

25-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

26-c the intima of the renal artery is less elastic, thus, it is more liable to develop thrombosis following major deceleration injury. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

27-b the squared velocity is directly proportional to the energy. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

28-a the scenario describes a crush injury of a viable ureter, stenting the ureter is the preferred management. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

29-b self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

30-a the very first step is to place a nephrostomy tube. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

LOWER URINARY TRACT TRAUMA

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **The most common mechanism of blunt bladder trauma is:**
   a. motor vehicle accident
   b. fall from a height
   c. violence
   d. none of the above

2) **How common do patients with pelvic fractures have urethral injuries?**
   a. 2 – 10 %
   b. 10 – 25 %
   c. 25 – 35 %
   d. 35 – 45 %

3) **What is false concerning traumatic bladder rupture?**
   a. intraperitoneal are commoner than extraperitoneal bladder perforations
   b. combined intra and extraperitoneal perforations occur in about 10% of the total
   c. pediatrics, the incidence of intraperitoneal bladder perforation is markedly higher than extraperitoneal perforations
   d. all idiopathic bladder perforations are intraperitoneal

4) **What is false concerning intraperitoneal bladder rupture?**
   a. results of a direct blow to a distended bladder
   b. hyperkalemia, hypernatremia, and renal failure might occur
   c. cystogram, the contrast may outline loops of bowel, fill the paracolic gutters, and pool under the diaphragm
   d. disruption of the puboprostatic ligaments might occur

5) **What is false concerning extraperitoneal bladder rupture?**
   a. typically, is an anterolateral perforation of the bladder due to fractured anterior rami of the pelvic bones
   b. the association with pelvic fracture is in > 90% of cases
   c. cystogram, the contrast shapes like flames or feathers around the base of the bladder
   d. the bladder may assume a teardrop shape due to the extravasated urine from the dome

6) **What is false in managing bladder traumas?**
   a. minor intra or extraperitoneal perforations may be managed with bladder drainage alone
   b. the bladder should be drained for 10 - 14 days and then revaluated by static cystogram
   c. minor extraperitoneal perforations should be primarily repaired if the patient is going for abdominal exploration for other injuries
   d. cystogram should include AP, lateral, oblique and post drainage views

7) **A 12 yrs. boy falls down from a hoarse back and is overrun by the hoarse. He is brought to the casualty in pain and unable to void. No pelvic fracture is noted. A urethral catheter is introduced easily but no urine is drained. On filling the bladder, what is pushed in does not come out. What is the most likely diagnosis?**

a. partial posterior urethral injury
b. intraperitoneal bladder injury
c. extraperitoneal bladder injury
d. none of the above

8) What is false concerning the mechanisms of urethral injuries?

a. anterior urethral injury occurs from a blunt blow to the perineum
b. posterior urethral injury occurs when a shearing force is exerted on the prostatomembranous junction
c. not uncommonly, inflating the Foley's catheter`s balloon in the bulbous urethral results in anterior urethral injury
d. transurethral procedures e.g. TURP could end in a posterior urethral thermal injury and stricture

9) Which of the following signs does NOT indicate a urethral injury?

a. teardrop shaped bladder
b. pie-in-the sky bladder
c. high-riding prostate on rectal examination
d. blood at external meatus

10) In the acute setting, the proper procedure to diagnose urethral injury is:

a. descending urethrogram
b. ascending urethrogram
c. uroflowmetry
d. flexible cystoscopy

11) If an early repair of a posterior urethral injury secondary to a pelvic fracture is desired, it should be:

a. soon after the accidence
b. within one week of the accidence
c. 2 – 4 weeks after the accidence
d. early realignment is not a treatment option

12) The conventional management of posterior urethral injury secondary to pelvic fracture is:

a. primary repair
b. placing a suprapubic catheter for drainage and repair in 3 months
c. clean intermittent catheterization (CIC), to prevent urethral stricture
d. delayed primary repair in 2 – 4 weeks

13) What is the commonest long-term complication of urethral injuries?

a. erectile dysfunction
b. stress incontinence
c. recurrent strictures
d. repeated infections

14) What is the most common cause of iatrogenic urethral trauma?

a. transurethral surgery
b. cystectomy operation
c. cryotherapy procedure
d. Foley`s catheterization

15) What is true regarding penetrating injuries to the anterior urethra?

a. should be explored immediately
b. defects of up to 1.5 cm can be treated by spatulation and primary anastomosis
c. longer defects or infected wounds may be repaired in stages
d. all of the above

16) What is the most telling radiologic examination in diagnosing bladder rupture?

a. contrast abdominopelvic CT
b. a 30 min film of IVU
c. micturating cystography
d. static cystography

17) What is the most telling radiologic examination in diagnosing urethral rupture?

a. ascending urethrography
b. post void film of IVU series
c. descending cystourethrography
d. none of the above

18) What is the most likely diagnosis of blood at the external meatus in a case of pelvis fracture?

a. fracture of the penis
b. anterior urethral rupture
c. posterior urethral rupture
d. extraperitoneal bladder rupture

19) In a patient with stable hemodynamics, intraperitoneal bladder rupture is managed by:

a. suprapubic bladder drainage and a delayed repair in 6 – 12 weeks
b. immediate exploration for primary repair
c. 2 weeks of intra-abdominal and suprapubic catheter drainage and then re-evaluate
d. 2 weeks of urethral catheterization

ANSWERS TO LOWER URINARY TRACT TRAUMA

1-a motor vehicle accidents constitute about 87% of cases. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

2-b self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

3-a extraperitoneal are commoner. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

4-d disruption of the puboprostatic ligaments is a feature of extraperitoneal bladder rupture. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

5-d the bladder may assume a teardrop shape due to the compressing pelvic hematoma. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

6-c the description fits intraperitoneal perforations. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

7-b self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

8-d the mechanism fits anterior urethral injury. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

9-a teardrop bladder is a sign of extraperitoneal bladder rupture. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

10-b self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

11-b when performed 5 - 7 days post injury, the pelvic hematoma would be stabilized and hemorrhage will not be a major concern. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

12-b self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

13-c self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

14-d 32% of iatrogenic urethral strictures are due to faulty catheterizations. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

15-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

16-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

17-a self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

18-c typically, this presentation is of posterior urethral rupture. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

19-b in hemodynamically stable patients, full primary repair is advised. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

GENITAL TRAUMA

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **What is true concerning the mechanism of penile fracture?**
   a. is a traumatic rupture of the corpus cavernosum
   b. is a quick forceful bending of the penis while erection
   c. is a traumatic fissure in the tunica albuginea
   d. all of the above

2) **Penile fractures are basically diagnosed upon:**
   a. history and physical examination
   b. penile color Doppler ultrasonography
   c. cavernosography
   d. MRI

3) **What is false concerning penile fractures?**
   a. commonly, results in a 0.5-4 cm longitudinal tear of the tunica albuginea
   b. associated urethral injuries are more noted in bilateral cavernosal tears
   c. during erection the tunica albuginea thins from 2 mm to 0.25-0.5 mm
   d. may present as an "eggplant" deformity

4) **What is false concerning physical examination of a fractured penis?**
   a. "butterfly" deformity suggest Colles fascia tear
   b. "eggplant" deformity suggests Buck`s fascia tear
   c. when hematoma is confined under Buck`s fascia, the injury presents as a penile nodule
   d. the penis is often presented curved and deviated towards the site of the tear

5) **What is the likelihood that conservative management of penile fractures results in good outcomes?**
   a. never
   b. unlikely
   c. likely
   d. always

6) **A 21 yrs. man sustains a motor traffic accident. On examination, his right testis is found at the subcutaneous epifascial planes. What is the most likely diagnosis?**
   a. testicular fracture
   b. retractile testis
   c. testicular dislocation
   d. testicular rupture

7) **What is false concerning a testicular rupture?**
   a. a force of around 50 kg is necessary to cause testicular rupture
   b. the vast majority of cases are related to direct blunt scrotal trauma
   c. sufferers present in pain, nausea, vomiting, and occasionally fainting
   d. color Doppler ultrasonography, reliably, evaluates testicular perfusion in trauma cases

8) **What is true concerning injuries to the female genitalia?**

a. to 35% of cases occur during first sexual contact
b. associated pelvic and/or abdominal injuries might occur
c. most presentations are pain and swellings
d. all of the above

9) What is the respective sensitivity and specificity of ultrasonography in diagnosing testicular trauma?

a. 93.5% and 100%
b. 88% and 90.4%
c. 73.8% and 87%
d. 68.2% and 76.2%

10) What is the percentage of hematoceles associated with testicular ruptures?

a. 20%
b. 40%
c. 60%
d. 80%

11) What type of scrotal injuries, typically, takes place while operating a heavy machinery:

a. penetrating
b. blunt
c. degloving
d. dislocation

12) What is false concerning ultrasonic findings in acute scrotal traumas?

a. contrast-enhanced ultrasonography provides no additional information
b. the most telling finding of testicular rupture is a projecting testicular tissue outside its confinements
c. absence of blood flow indicates a torsion or a devascularization injury
d. aging scrotal hematoma appears as hypo-, iso- or hyperechoic area

13) What is emergently recommended in unilateral traumatic amputation of the testis?

a. microvascular re-implantation within 6 hrs. of the injury
b. sperm extraction for cryopreservation if re-implantation failed
c. placing a testicular prosthesis if re-implantation failed
d. concomitant injury to the vas deferens should be microsurgically repaired, even if re-implantation failed

ANSWERS TO MALE GENITAL TRAUMA

1-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

2-a self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

3-a the tear is commonly transverse not longitudinal. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

4-d the penis is often presented in S-shape and deviated away from the site of the tear. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

5-c approximately, 60% of those treated conservatively ends with good results. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

6-c the scenario describes an external dislocation of the testis. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

7-b about only 50% of cases is caused by direct blunt scrotal trauma. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

8-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

9-a self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

10-d as many as 80% of hematoceles is associated with testicular rupture. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

11-c typically, operating a machinery could result in avulsion (degloving) type of injury. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

12-b the most telling finding of testicular rupture is a discrete fracture plane. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

13-a soft tissues survive ischemia for up to 6 hrs. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

UROLOGIC POLYTRAUMA AND DAMAGE-CONTOL APPLICATIONS

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **What should the management be of polytrauma patients with deteriorating hemodynamic parameters after 12 hrs. of initial damage-control laparotomy and renal fossa packing?**
   a. reoperation
   b. angiographic embolization of the bleeding kidney
   c. any of the above
   d. fresh blood transfusion and repeat contrast CT

2) **On laparotomy, for intra-abdominal hemorrhage and grade III left renal trauma, the patient is hemodynamically stable. What should the attending urologist do?**
   a. take an on-table one-shot urography and manage accordingly
   b. explore the kidney, suture the deep parenchymal lacerations, and evacuate the hematoma
   c. not to explore the kidney
   d. perform damage-control nephrectomy

3) **On exploring a right traumatically shattered kidney, hemorrhage is not controlled. What would be next step?**
   a. perform damage control renal packing and send the patient to the ICU with the intention to take a second look later
   b. perform nephrectomy
   c. insert a nephrostomy tube and close the wound under pressure
   d. perform a full renal repair using hemostatic sutures and gauze

4) **In the setting of a seriously traumatized left kidney, renal exploration aims at all of the following, EXCEPT:**
   a. control life-threatening bleeding
   b. preservation of viable renal parenchyma
   c. meticulous renal reconstruction
   d. applying damage-control principles when necessary

5) **In the setting of multiple penetrating abdominal injuries. The patient is hemodynamically unstable. On exploration, without prior imaging, the left mid ureter found half away severed. What would be the management?**
   a. insert a double J-stent over a guide wire through the tear and ensure correct positioning by fluoroscopy
   b. perform retrograde ureteropyelography to evaluate ureteral injuries and quickly close the ureteral tear
   c. perform temporary ureterocutaneus urinary diversion
   d. ligate the ureter, leave a drain, and insert post op. nephrostomy

6) **On exploring a polytrauma patient with unstable hemodynamics, a ureteral injury was suspected. What would be the management?**
   a. leave a drain at where urine is accumulating
   b. search the ureter and ligate it

c. perform retrograde ureteropyelography and manage accordingly
d. perform on-table urography and manage accordingly

7) A 31 yrs. man with an unstable hemodynamics presents to the casualty 3 hrs. after devascularization of the kidney due to hilar injury, in addition to a grade IV ipsilateral ureteral trauma. How should the ureteral injury be managed?

a. ligate the injured ureter and leave a drain
b. perform a brief ureteral repair over a stent
c. ligate the ureter and insert a nephrostomy tube
d. none of the above

8) A large intraperitoneal bladder rupture associated with unstable pelvic fractures, major vessels` bleeds, and grade IV anesthesia ASA classification. The patient should be managed by:

a. bladder packing and later repair
b. placing urethral and/or suprapubic tubes
c. emergency bladder closure
d. none of the above

9) A mass casualty incident is paged when:

a. the number of injured people, before triage, is 50 or greater
b. the sufferers have a multisystem trauma
c. the number of the victims is significantly greater than the number of the rescuers
d. the sufferers` conditions cannot be managed on the trauma scene

10) In which of the following injuries the conventional management lines up with the damage-control policies?

a. intraperitoneal bladder rupture
b. expanding extrarenal hematoma
c. posterior urethral transection
d. grade III mid ureteral injury

ANSWERS TO UROLOGIC POLYTRAUMA AND DAMAGE-CONTROL APPLICATIONS

1-c self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

2-c renal exploration is required to control life-threatening hemorrhage. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

3-b damage-control nephrectomy is indicated as significant hemorrhage is running. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

4-c in serious renal injuries meticulous repair of renal tissue is not indicated. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

5-d the described management is when the ureter is visualized with more than half the diameter transected. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

6-a as the patient is unstable and ureteral injury is not certain, damage-control principles entail leaving a drain for later management. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

7-d at this terrible situation damage-control nephrectomy is indicated. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

8-b self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

9-c self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

10-c placing a suprapubic catheter for drainage and repair in 3 months is the management plan in either regimen. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

ENURESIS

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **Which of the following criteria does not line up with the diagnosis of monosymptomatic primary enuresis in a 6 yrs. girl?**
   a. diurnal incontinence
   b. positive family history
   c. gradual resolution of the symptoms over years
   d. she has never achieved a satisfactory period of night time dryness

2) **What is the least important issue to inquire about while taking a history of bed wetting in pediatrics?**
   a. bowel habits
   b. daytime incontinence
   c. prematurity
   d. major motor seizures

3) **What is the prevalence of monosymptomatic nocturnal enuresis at the age of 10?**
   a. 1 – 3 %
   b. 3 – 7 %
   c. 7 – 9 %
   d. 9 – 12 %

4) **Dysfunctional voiding in pediatrics is suspected in:**
   a. girls with diurnal enuresis
   b. infrequent voiders
   c. children assuming squatting behaviour
   d. all of the above

5) **What is false concerning the management of enuresis in childhood?**
   a. rare instances, the treatment could be surgical
   b. the most important point is to raise the child`s self-esteem and to resolve psychological and/or behavioral problems
   c. the commonest drawback is family incompliance
   d. the reported natural history is spontaneous cure at a rate of 15% per annum

6) **Which of the following physical examinations is least related to enuresis in children?**
   a. proximal penile hypospadias
   b. dimples on either side of the sacrum
   c. the inability to stand on the toes
   d. the presence of hair tuft or skin discoloration over the lower back

7) **In childhood enuresis, MRI of the spine is indicated with the following finding(s):**
   a. abnormal neurologic findings of the lower extremities
   b. the presence of dimples on either side of the sacrum or hair tuft, skin discoloration over the lower back
   c. the presence of gait abnormality, encopresis, and daytime enuresis

d. any of the above

8) What is false concerning "alarm therapy" on treating enuresis in children?

a. works best with deep sleepers
b. reduces nocturnal urine output
c. should be continued for a month after achieving full dryness
d. should be considered for every patient of primary type

9) Which of the following anti-enuresis medications could result in serious hyponatremia?

a. desmopressin acetate
b. oxybutynin chloride
c. imipramine
d. botulinum toxin A

10) Which of the following is the least to cause adult enuresis:

a. HTN medications
b. sleep apnea
c. senile prostatic enlargement
d. end-stage renal disease

ANSWERS TO ENURESIS

1-a diurnal pattern of incontinence suggests the non-monosymptomatic type of enuresis. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

2-c prematurity has little, if any, to do with enuresis pathogenesis. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

3-b at 10 yrs. the prevalence ranges from 3 to 7% according to the gender. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

4-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

5-c relapses of enuresis are the commonest drawbacks. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

6-a hypospadias has no role in enuresis pathogenesis. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

7-d self-explanatory. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

8-b it alleviates incontinence by increasing nocturnal bladder capacity or by enhanced arousal but it doesn`t reduce urine output at night. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

9-a desmopressin could result in severe water intoxication and serious hyponatremia. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

10-d ESRD patients are generally anuric. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

URINARY INCONTINENCE

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **All of the following medications may alleviate symptoms of urge incontinence, EXCEPT:**
   a. duloxetine
   b. mirabegron
   c. fesoterodine
   d. estrogen

2) **Procedures that treat urge urinary incontinence include all of the following, EXCEPT:**
   a. sacral nerve modulation
   b. injection of neurotoxins
   c. bladder neck lifting
   d. bladder augmentation

3) **What type of urinary incontinence is characterized by involuntary leakage typically while exertion, sneezing or coughing; accompanied by urgency?**
   a. functional
   b. urge
   c. stress
   d. mixed

4) **What is false concerning stress incontinence pathophysiology?**
   a. physiologically, during sneezing, the intra-abdominal pressure increases over the bladder and the abdominal part of the urethra; ending in no leakage
   b. while leaking bladder pressure exceeds the urethral resistance
   c. during episodes of stress incontinence, leakage ceases when bladder pressure falls below urethral pressure
   d. the major cause of stress incontinence is intrinsic sphincter deficiency

5) **Repeated vaginal deliveries could result in stress incontinence due to:**
   a. connective tissue injuries
   b. pelvic and/or pudendal nerves denervation
   c. levator ani muscle tears
   d. any of the above

6) **Which of the following is false concerning total urinary incontinence?**
   a. any significant breech in the storage capabilities of the bladder or urethra could end in total incontinence
   b. urinary fistula and ectopic ureters are common examples
   c. commonly results from mechanical or neurological injuries to both internal and external urinary sphincters
   d. continuous leakage of urine, not uncommonly, presents with skin infections, frustrations and impaired life quality

7) **What is the most common cause of intrinsic sphincter deficiency in men?**
   a. radical prostatectomy or TURP

b. pelvic trauma or neurologic dysfunction
c. idiopathic or as an aging process
d. pelvic fractures following high-impact deceleration injuries

8) How common is urinary incontinence among elderly in long-term care facilities?

a. uncommon
b. not uncommon
c. common
d. exceedingly common

9) What is false concerning overflow incontinence?

a. symptoms are similar to those of mixed urinary incontinence
b. may presents with hydroureteronephrosis and renal failure
c. typical examples are bladder outlet obstruction and automatic bladder
d. urine leaks out when the intravesical pressure exceeds the resting urethral closure pressure

10) Fluoroscopy and video urodynamic are valuable tools in the evaluation of:

a. ureterovesical and vesicovaginal fistula
b. complex stress incontinence cases
c. neurogenic non-neurogenic dysfunctional voiding in children
d. is the preferred method to diagnose detrusor-sphincter dyssynergia

11) A 25 yrs. man on treatment for chronic prostatitis, complains of post-micturition dribbling. What is the likelihood that diagnostic cystoscopy yields additional significant findings?

a. never
b. unlikely
c. likely
d. always

12) What is false concerning neuromodulation?

a. has been used to treat fecal incontinence
b. the primary innervation of the bladder is S_3
c. to function, it requires effective communications between sacral outflow and the pontine micturition centre
d. it suppresses neurons that cause inhibition at spinal the level

13) Direct electrical stimulation to the bladder results in:

a. pain in the abdomen, pelvis, perineum, and legs
b. defecation, erection, and ejaculation
c. parasympathetic stimulation results in emptying of the bladder
d. all of the above

14) Bladder hyperactivity accompanies genuine stress urinary incontinence in:

a. 10 % of cases
b. 20 % of cases

c. 30 % of cases
d. 40 % of cases

15) A 34 yrs. multipara having stress urinary incontinence. What does not align with the diagnosis of intrinsic sphincter deficiency is:

a. the advice to undergo retropubic colposuspension
b. leak point pressure < 60 cm H_2O
c. maximum urethral closure pressure < 20 cm H_2O
d. the advice to take duloxetine 20 mg bid

16) In women, transobturator tape procedure is particularly helpful in treating urinary incontinence that results of:

a. urethral hypermobility
b. intrinsic sphincter deficiency
c. detrusor overactivity
d. genital prolapse

17) Which urodynamic equation is true?

a. the maximal urethral closure pressure is the maximum urethral pressure minus intravesical pressure
b. the detrusor pressure is the intravesical pressure minus intra-abdominal pressure
c. in children, bladder capacity in cm^3 is determined by adding the value 2 to the patient`s age, and then multiplying the sum by 30
d. all of the above

18) What is the likelihood that a woman with stress urinary incontinence status post sling excision gets incontinence again?

a. never
b. unlikely
c. likely
d. always

19) In women with stress urinary incontinence, injectable agents are particularly helpful in treating cases that result of:

a. urethral hypermobility
b. intrinsic sphincter deficiency
c. detrusor overactivity
d. genital prolapse

20) What is false concerning injecting bulking agents to treat stress incontinence due to ISD?

a. the material should be biocompatible and adhesive to host tissue
b. transurethral route of injection is far superior to paraurethral route
c. the agent is allowed to cause little inflammatory reaction
d. microcrystalline particle`s size should be > 100 μm to prevent migration

21) What is false concerning botulinum toxin A injections to treat detrusor overactivity?

a. it blocks neuromuscular transmission by inhibiting the release of acetylcholine
b. the recommended dose of onabotulinumtoxin A is 200 U per treatment
c. if symptoms recur, reinjection is indicated but no sooner than 2 weeks
d. injections should be to a depth of about 2 mm, distributed all around the bladder excluding the trigone

ANSWERS TO URINARY INCONTINENCE

1-a duloxetine treats stress incontinence by inhibiting the presynaptic re-uptake of neurotransmitters, serotonin, and norepinephrine. Furthermore, it increases the resting tone and contraction strength of the urethral striated sphincter. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

2-c bladder neck suspension procedures are meant to treat stress incontinence. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

3-d the description meets mixed, urge and stress incontinence. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

4-d the major cause of stress incontinence is urethral hypermobility due to impaired support from pelvic floor. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

5-d self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

6-c commonly results from congenital anomalies such as ectopic ureters, bladder exstrophy, and fistulas. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

7-a self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

8-c urinary incontinence affects approximately 50-85% of the elderly in long-term care facilities. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

9-c automatic (reflex neurogenic) bladder doesn`t manifest as overflow incontinence. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

10-b self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

11-b apart from prostatitis, post micturition dribble could be due to myogenic dysfunction of the urethral muscles. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

12-d it activates neurons that cause inhibition at spinal and supraspinal levels. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

13-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

14-c self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

15-a retropubic colposuspension is not recommended for ISD cases. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

16-a TOT and TVT are particularly useful for urethral hypermobility patients. Smith and Tanagho's General Urology, 18th Edition, by Jack W. McAninch, and Tom F. Lue.

17-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

18-c there is an approximately 30 - 50% risk of incontinence following sling excision. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

19-b injectable bulking agents are particularly useful in ISD cases. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

20-b paraurethral and transurethral routes of injection yield similar results. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

21-c reinjection should be no sooner than 12 weeks. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

NEUROMUSCULAR BLADDER DYSFUNCTIONS

Directions: each question has 4 choices, select ONE BEST answer to each question

1) **What type of neurogenic bladder does manifest as an overactive detrusor, exaggerated sacral reflexes, detrusor-sphincter dyssynergia, thickened bladder wall, and closed bladder neck?**
   a. atonic neurogenic urinary bladder
   b. automatic urinary bladder
   c. autonomous urinary bladder
   d. irritable urinary bladder

2) **What are the normal voiding pressures in boys and in girls?**
   a. 55 - 80 cm H_2O and 30 - 65 cm H_2O respectively
   b. 45 - 70 cm H_2O and 20 - 55 cm H_2O respectively
   c. 35 - 60 cm H_2O and 10 - 45 cm H_2O respectively
   d. 55 - 80 cm H_2O and 30 - 65 cm H_2O respectively

3) **Below what limit should resting bladder pressure be maintained to prevent upper tract function deterioration?**
   a. 30 cm H_2O
   b. 35 cm H_2O
   c. 40 cm H_2O
   d. 45 cm H_2O

4) **A 69 yrs. diabetic man with a history of ischemic stroke and BPH complaining of urgency, intermittency, and poor stream of urine. Uroflowmetry shows a prolonged depressed curve with the following parameters: 280 ml prevoid volume, 130 ml postvoid residual, 11 mL/s maximum flow rate, 56 sec. voiding time. What could be the cause?**
   a. bladder outlet obstruction
   b. over reflexive bladder
   c. hypo active detrusor
   d. a combination of all

5) **What is false concerning myelodysplasia in girls?**
   a. urodynamic might exhibit synergy, dyssynergy, and/ or complete denervation
   b. serum cystatin C may be a better predictor of renal function when compared to creatinine
   c. they might achieve puberty 2 years earlier than controls
   d. auto augmentation is the ideal surgical treatment

6) **In a 5 yrs. child with neurovesical dysfunction, detrusor-sphincter dyssynergia, and high-grade vesicoureteral reflux; initial management should be by:**
   a. watchful waiting for febrile UTIs for at least 6 month
   b. CIC and anticholinergics
   c. ureteroneocystostomy
   d. vesicostomy with or without antireflux subureteral injections

7) In a child with myelodysplasia, what is the most prognostic parameter in urodynamic studies that reflects upper tract dysfunction?

a. elevated leak-point pressure
b. elevated Valsalva leak-point pressure
c. declined maximum urethral closure pressure
d. declined urethral pressure profilometry

8) What is false regarding bladder compliance?

a. urinary bladder is the most compliant organ in the body
b. is the ability of the bladder to expand at a low storage pressure
c. basically, it is an interaction between intracellular matrix and smooth muscle cells
d. the autonomic nervous system contributes significantly to bladder tone

9) What is false concerning the maximal urethral closure pressure (MUCP) in a 32 yrs. woman complaining of stress incontinence?

a. is the maximum urethral pressure minus intravesical pressure
b. MUCP of < 20 cm water implies that she is a good candidate for Burch colposuspension
c. the functional urethral length measures the distance along the urethra where urethral pressure exceeds bladder pressure
d. nearly all patients with stress urinary incontinence have somehow an element of intrinsic sphincter deficiency

10) What type of bladder dysfunctions do diabetic patients, initially, develop?

a. reflex neurogenic
b. sensory neurogenic
c. motor neurogenic
d. automatic neurogenic

11) What type of bladder dysfunctions do symptomatic disc prolapse patients, commonly, develop?

a. Hinman syndrome
b. detrusor areflexia
c. autonomic dysreflexia
d. upper motor neuron lesion

12) Which of the following is NOT a feature of Prune- Belly syndrome?

a. defective abdominal musculature
b. bilateral intra-abdominal testes
c. epispadias
d. anomalous urinary tract

13) How common do bladder exstrophy patients have vesicoureteral reflux?

a. uncommon
b. not uncommon
c. common
d. exceedingly common

14) What is the least common feature of cloacal exstrophy?

a. spinal defects
b. complete phallic separation
c. imperforate anus
d. exstrophy of the terminal ileum

15) Which statement is false regarding detrusor under activity (DUA)?

a. Watt factor for bladder power is not affected by increased outlet resistance
b. multisystem atrophy disease is frequently associated with DUA on urodynamic
c. intravesical electrotherapy works by direct stimulation of detrusor myocytes and to a lesser extent by inhibiting pathologic urethral afferent signaling
d. treatment plans involve timed voiding and CIC

16) What type of bladder capacities best described as the largest volume of urine voided as per the urinary diary chart?

a. full bladder capacity
b. maximum anesthetic capacity
c. functional bladder capacity
d. maximum cystometric capacity

17) What is the most telling cystometric sign of bladder outlet obstruction on conducting pressure flow studies for a BPH patient?

a. detrusor pressure at maximum flow > 100 cm H_2O
b. detrusor opening pressure > 80 cm H_2O
c. increased maximum urethral closure pressure
d. increased opening time

ANSWERS TO NEUROMUSCULAR BLADDER DYSFUNCTIONS

1-b neurogenic bladder due to complete transection of the spinal cord above the sacral segments (UMNL). Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

2-a self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

3-c self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

4-d self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

5-d in girls with myelodysplasia, auto augmentation is not effective. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

6-b self-explanatory. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

7-a self-explanatory.

8-c it is an interaction between extracellular matrix, smooth muscle cells, and autonomic innervations of the bladder.

9-b MUCP of < 20 cm water implies intrinsic sphincter deficiency. Therefore, bladder neck suspension surgery is not the ideal management. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

10-b the process of neuropathy begins with sensory neurogenic and proceeds overtime to become sensory and motor neuropathy.

11-b discs usually prolapse at L_4-L_5 or L_5-S_1 levels giving LMNL symptoms including areflexive bladder.

12-c self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

13-d VUR is present in all bladder exstrophy patients. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

14-a spinal defects are not common in extrophy patients. Adult and Pediatric Urology, fourth edition, by Jay Y. Gillenwater MD, John T. Grayhack MD, Stuart S. Howards MD, Michael E. Mitchell MD.

15-c intravesical electrotherapy works by activating mechanosensitive bladder afferent fibres. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

16-c self-explanatory. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.

17-a voiding at high pressure is the most telling parameter to diagnose BOO and to refute weak detrusor contractility. Campbell-Walsh Urology, 11th Edition, by Alan J. Wein, Louis R. Kavoussi, Alan W. Partin, Craig A. Peters.